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QUESTIONS, ANSWERS, AND THANKS

Editor's Comment

s ASR Editor, my goal is to publish interesting, rigorous, and readable papers based on exemplary work from inclusive sets of topics, methods, and theoretical approaches to sociology. I invite you to help me realize this goal. You can craft and submit excellent papers, even if your area is not frequently represented in ASR. You can provide timely and constructive reviews for papers in areas where you have expertise, even if the papers are on topics outside your narrowly defined subspecialty. If you have not reviewed for me, but want to do so, send me your vita and interests. I also invite you to send me your suggestions about how an editor might deal systematically with the issues that concern you.

SOME QUESTIONS AND ANSWERS

As the new ASR editor, I have already been asked many questions about policies and procedures. I'll answer some frequently-asked questions here.

How are papers judged?

An ASR paper should be coherent—held together by one or a few related questions—and be readable by most sociologists. The typical published article makes new theoretical and empirical contributions. A paper may make a strong contribution in one area and contribute less in another. At the limit, this means that an ASR article can be entirely theoretical or empirical, as long as the contribution in that area is unusually strong.

Papers are judged by the quality of the theoretical discussion, the relevance of the empirical analysis to the theory, and the adequacy of the data, methods, and analysis for answering the question. Papers are also judged by whether they add to our knowledge, so you should state how your work augments the literature.

Is there a length limit for manuscripts?

No, but there are guidelines. Manuscripts average about 40 (double-spaced) pages, includ-

ing tables and references. Reviewers rebel against evaluating papers longer than about 70 pages, making it difficult to get a fair review. Unusually long papers are advisable only when the length is necessary to make the argument.

Will you publish notes?

You may submit what I call "research and theory notes." Such papers contain primarily empirical or theoretical contributions, but not both. They must be less than 20 pages long, including tables and references. If you ask me to consider your paper as a note, I will ask reviewers to evaluate the paper as such, requiring the same quality of argument as in a full paper, but not demanding both theoretical and empirical contributions. I occasionally suggest that a paper submitted as an article be shortened to a note. Published notes will not be labeled as such, but will be grouped by topic with other articles.

What are the criteria for comments?

Comments are criticisms of articles published in ASR. They must be no longer than eight pages and must make a case that a major conclusion of the original article is wrong—I will not publish a comment that critiques a minor point or that fails to show how the criticism invalidates a major conclusion. Comments meeting this criterion will be sent out for review to assess the validity of the criticism. If a comment is accepted, I will invite the authors of the original article to write a reply to be published with the comment. Publication of a comment does not imply that I think the article was wrong and the comment is right, but rather that a strong case has been made by both author and critic. On occasion, when I accept a paper on a topic on which there is an ongoing debate, I may invite a relevant commentary that I think readers would find interesting. In this case, the article, comment, and reply will appear in the same issue.

ASR considers only original work. What does "original" mean?

When you submit a paper to ASR, you must abide by the ASA code of ethics. Submitting a paper, therefore, constitutes a statement that your paper is an original work—that it is not under review, forthcoming, or already published elsewhere. If the contributions of two papers you have written overlap substantially, I will consider the new paper to be original if more than half of its arguments and/or evidence are new. A paper may meet this criterion but still be rejected because its new contribution is not important enough for publication in ASR. If you are unsure about whether your paper is "original," send me the related paper along with your submission and ask me to adjudicate the issue before review.

How do authors' options differ for "revise and resubmit" and "reject" decisions?

If your paper is rejected, your best strategy is to revise, using the criticisms that are warranted and doable, and to send the revision to another journal. If, in response to criticisms, you revise a rejected paper so much that it bears little resemblance to the old paper, you may submit the new paper to ASR—but please remind me of its "ancestor." If you want me to reconsider a reject decision, you may write to me, detailing why the reviewers' criticisms were wrong. I don't claim that there is always one, "true" answer or that my decisions are always right. But I do make most decisions for multiple reasons. Thus, unless you can present a strong rebuttal of all important criticisms made by the reviewers, I will stick by my original decision. I ask you not to make this call on · my time unless you can offer an unusually strong rebuttal. I will not reconsider any decisions made by former ASR Editors.

I invite authors to "revise and resubmit" when I believe that (1) the problems reviewers have identified can be fixed, (2) the authors show they are capable of fixing them, and (3) based on the first two factors, I think there is

better than a 50/50 chance that the revision will be accepted if the authors deal seriously with the criticism provided. It is unwise to submit a paper that you know still needs a lot of work in the hopes of getting some help; the paper may be rejected because you give the impression that you are not capable of a successful revision. When a revised paper is submitted, I generally choose the majority of reviewers from among the previous reviewers. My intent is to insist that authors deal seriously with the criticisms provided and to avoid a process in which each round of reviews uses entirely new perspectives and criteria.

THANK YOU TO ...

Working as ASR Editor for the past few months has impressed upon me that publishing a journal is a huge collective effort, so I conclude with a "thank you" to all who participate. The transition from Gerald Marwell's editorship to mine is now complete. Most of the papers in this issue were reviewed and accepted during Jerry's editorship; the April and June issues will contain papers from both editorships. I thank Jerry for his help. He provided candid and spirited views of how things work "where the rubber meets the road," while expressing confidence that I would make good decisions. The transition went smoothly, thanks to the continuity provided by Karen Bloom, Managing Editor since 1989. Karen will work with me from Madison, Wisconsin, overseeing the publication of accepted manuscripts. I can't imagine doing this job without the precise and reliable work of doctoral students Melissa Herbert and Satoshi Kanazawa, who manage the Arizona office. My deputy editors-Trond Petersen, Lynn Smith-Lovin, and Charles Tilly-are distinguished scholars with broad and deep knowledge. I am privileged to work with them. I am indebted to the ASR Board of Associate Editors, who turn in sound and helpful reviews at the demanding pace of roughly one a month. And of course, the bulk of the labor going into a journal comes from authors and reviewers. Thanks to all, we're off to a good start.

THE SOCIAL REQUISITES OF DEMOCRACY REVISITED* 1993 Presidential Address

SEYMOUR MARTIN LIPSET George Mason University

In this paper I discuss the factors and processes affecting the prospects for the institutionalization of democracy throughout the world. I survey cultural and economic variables, religious traditions, various electoral systems, the importance of a participatory civil society, and the methods through which political parties should be structured to maintain stability. I conclude that, because new democracies have low levels of legitimacy, there is a need for considerable caution about the long-term prospects for their stability. In many countries during the 1980s and early 1990s, political democratization occurred at the same time as a profound economic crises. Such conditions have already caused the breakdown of democratization in a number of countries. To attain legitimacy, what new democracies need above all is efficacy, particularly in the economic arena, but also in the polity. If they can take the high road to economic development, they can keep their political houses in order. The opposite is true as well: Governments that defy the elementary laws of supply and demand will fail to develop and will not institutionalize genuinely democratic systems.

he recent expansion of democracy, what Huntington (1991) has called "the third wave," began in the mid-1970s in Southern Europe. Then, in the early and mid-1980s, it spread to Latin America and to Asian countries like Korea, Thailand and the Philippines, and then in the late 1980s and early 1990s to Eastern Europe, the Soviet Union and parts of sub-Saharan Africa. Not long ago, the overwhelming majority of the members of the United Nations had authoritarian systems. As of the end of 1993, over half, 107 out of 186 countries, have competitive elections and various guarantees of political and individual rights-that is more than twice the number two decades earlier in 1970 (Karatnycky 1994:6; Freedom Review 1993:3-4, 10). Democracy is weakest in Islamic countries (where, as I will discuss later,

*Direct all correspondence to Seymour Martin Lipset, Institute of Public Policy, Pohick Module, George Mason University, Fairfax, VA, 22030. This paper was written with assistance provided by the Hoover Institution of Stanford University and the Woodrow Wilson Center for International Scholars. It incorporates and extends my earlier work on the social requisites of democracy over three decades (Lipset [1960] 1981; Lipset, Seong, and Torres 1993). I am indebted to Chris Winters and Scott Billingsley for research assistance and to Larry Diamond for intellectual commentary. An earlier version was presented as a Stein Rokkan Memorial Lecture at the University of Bergen in November 1992.

few nations are democratic) and in parts of Africa. However, though not fully democratic, "more than 30 African countries are in the process of transition from an authoritarian civilian or military government to one that is more pluralistic" (Schneidman 1992:1; Diamond 1992b: 38–39; Diamond, 1993b:3–4). The move toward democracy is not a simple one. Countries that previously have had authoritarian regimes may find it difficult to set up a legitimate democratic system, since their traditions and beliefs may be incompatible with the workings of democracy.

In his classic work Capitalism, Socialism, and Democracy, Schumpeter (1950) defined democracy as "that institutional arrangement for arriving at political decisions in which individuals acquire the power to decide by means of a competitive struggle for the people's vote" (p. 250). This definition is quite broad and my discussion here cannot hope to investigate it exhaustively. Instead, I focus here on such things as cultural and economic variables, the debate about electoral systems, constitutional arrangements (e.g., presidents vs. parliaments),

¹ For elaborations, see Lipset (1981:27); Dahl (1970:78; 1971:150–62; 1982:11); Huntington (1991:5–13); and Schmitter and Karl (1993:40–46).

² For a discussion of the way definitions affect analyses of democracy, see Sartori (1983:28–34; 1987:257–77).

the importance of a participatory civil society, and the methods through which political parties should be structured to set up and maintain stability—in short, the factors and processes affecting the prospects for the institutionalization of democracy.

HOW DOES DEMOCRACY ARISE?

Politics in Impoverished Countries

In discussing democracy, I want to clarify my biases and assumptions at the outset. I agree with the basic concerns of the founding fathers of the United States—that government, a powerful state, is to be feared (or suspected, to use the lawyer's term), and that it is necessary to find means to control governments through checks and balances. In our time, as economists have documented, this has been particularly evident in low-income nations. The "Kuznets curve" (Kuznets 1955; 1963; 1976), although still debated, indicates that when a less developed nation starts to grow and urbanize, income distribution worsens, but then becomes more equitable as the economy industrializes (Olson 1963; Weede and Tiefenbach 1981; Todaro 1981:134; Bollen and Jackman 1985b; Muller 1988; Chan 1989; Weede 1993).3 Before development, the class income structure resembles an elongated pyramid, very fat at the bottom, narrowing or thin toward the middle and top (Lipset 1981:51). Under such conditions, the state is a major, usually the most important, source of capital, income, power and status. This is particularly true in statist systems, but also characterizes many socalled free market economies. For a person or governing body to be willing to give up control because of an election outcome is astonishing behavior, not normal, not on the surface a "rational choice," particularly in new, less stable, less legitimate polities.

Marx frequently noted that intense inequality is associated with scarcity, and therefore that socialism, which he believed would be an egalitarian and democratic system with a politically weak state, could only occur under conditions of abundance (Marx 1958:8–9). To try to move toward socialism under conditions of material scarcity would result in sociologi-

cal abortions and in repression. The Communists proved him correct. Weffort (1992), a Brazilian scholar of democracy, has argued strongly that, although "the political equality of citizens, ... is ... possible in societies marked by a high degree of [economic] inequality," the contradiction between political and economic inequality "opens the field for tensions, institutional distortions, instability. and recurrent violence ... [and may prevent] the consolidation of democracy" (p. 22) Contemporary social scientists find that greater affluence and higher rates of well-being have been correlated with the presence of democratic institutions (Lipset, Seong, and Torres 1993:156-58; see also Diamond 1992a). Beyond the impact of national wealth and economic stratification, contemporary social scientists also agree with Tocqueville's analysis, that social equality, perceived as equality of status and respect for individuals regardless of economic condition, is highly conducive for democracy (Tocqueville 1976: vol. 2, 162-216; Lipset 1981:439-50; Dahl 1971:85-104; Sartori 1987:343-345; Dogan 1988:11-12). But as Weffort (1992) emphasized, "such a 'minimal' social condition is absent from many new democracies, ... [which can] help to explain these countries' typical democratic instability" (p. 18).

The Economy and the Polity

In the nineteenth century, many political theorists noted the relationship between a market economy and democracy (Lipset 1992: 2). As Glassman (1991) has documented, "Marxists, classical capitalist economists, even monarchists accepted the link between industrial capitalism and parliamentary democracy" (p. 65). Such an economy, including a substantial independent peasantry, produces a middle class that can stand up against the state and provide the resources for independent groups, as many twentieth century scholars such as Weber (1906:346 ff), Schumpeter (1950), Moore (1966), Skocpol (1979), and Berger (1986; 1992) have also concluded. Schumpeter (1950) held that, "modern democracy is a product of the capitalist process" (p. 297). Moore (1966), noting his agreement with the Marxists, concluded, "No bourgeois, no democracy" (p. 418).

Berger (1992), from the conservative side, noted that while there "has been no case of po-

³ These generalizations do not apply to the East Asian NICS, South Korea, Taiwan and Singapore.

litical democracy that has *not* been a market economy, . . . [t]here have been numerous cases of *non*democratic market economies" (p. 9). That is, capitalism has been a necessary, but not sufficient condition (Diamond 1993a). As reported earlier (Diamond, Linz, and Lipset 1988:xxi), those democracies "most advanced in their capitalist development (size of market sector of the economy, autonomy of their entrepreneurial class) are also those that have been most exposed to pressures for democracy."

Waisman (1992:140–55), seeking to explain why some capitalist societies, particularly in Latin America, have not been democratic, has suggested that private ownership of the means of production is not enough to foster democracy. He has argued that a strong market economy is necessary. Where the state limits the market, where it fosters autarchy (a self-sufficient economy that limits competition), it spawns authoritarianism. A free market needs democracy and vice versa.

But while the movement toward a market economy and the growth of an independent middle-class have weakened state power and enlarged human rights and the rule of law, it has been the working class, particularly in the West, that has demanded the expansion of suffrage and the rights of parties (Therborn 1977; Rueschemeyer, Stephens, and Stephens 1992: 59, 97–98, 140–43). As John Stephens (1993) noted, "Capitalist development is associated with the rise of democracy in part because it is associated with a transformation of the class structure strengthening the working class" (p. 438).

Corruption, a major problem of governance, is inherent in systems built on poverty (Klitgaard 1991:86-98). The state must allocate resources it controls, such as jobs, contracts, and investment capital. When the state is poor, it emphasizes particularistic, personalistic criteria. The elimination of personal "networking" on resources controlled or influenced by the state is obviously impossible. Formulating laws and norms to reduce the impact of personal networks, rules that require the application of impersonal meritocratic standards, is desirable; but doing so has taken a long time to institutionalize in the now-wealthy countries, and has usually gone against the traditions and needs of people in less affluent ones. Hence, as Jefferson, Madison, and others argued in the

late eighteenth century, the less the state has to do the better; the fewer economic resources the state can directly control, the greater the possibilities for a free polity.

Therefore, a competitive market economy can be justified sociologically and politically as the best way to reduce the impact of nepotistic networks. The wider the scope of market forces, the less room there will be for rentseeking by elites with privileged access to state power and resources. Beyond limiting the power of the state, however, standards of propriety should be increased in new and poor regimes, and explicit objective standards should be applied in allocating aid, loans, and other sources of capital from outside the state. Doing this, of course, would be facilitated by an efficient civil service selected by meritocratic standards. It took many decades for civil service reforms to take hold in Britain, the United States, and various European countries (Johnston 1991:53-56). To change the norms and rules in contemporary impoverished countries will not be achieved easily, although South Korea appears unique in having done so in a relatively short period (Seung-Soo 1992; ... Macdonald 1992).

The Centrality of Political Culture

Democracy requires a supportive culture, the acceptance by the citizenry and political elites" of principles underlying freedom of speech, media, assembly, religion, of the rights of opposition parties, of the rule of law, of human rights, and the like (Almond 1956:34-42; Pye 1965:3-26; Dahl 1971:1-16; Bobbio 1987: 63-78; Diamond, Linz, and Lipset, 1990:16-18). Such norms do not evolve overnight. Attempts to move from authoritarianism to democracy have failed after most upheavals from the French Revolution in 1789 to the February Revolution in Russia in 1917, from those in most new nations in Latin America in the nineteenth century to those in Africa and Asia after World War II. Linz (1988) and Huntington (1991) noted that the two previous waves of democratization were followed by "reverse waves" which witnessed the revival of authoritarianism. "Only four of the seventeen countries that adopted democratic institutions between 1915 and 1931 maintained them throughout the 1920s and 1930s.... [O]nethird of the 32 working democracies in the

world in 1958 had become authoritarian by the mid-1970s" (Huntington 1991:17-21).

These experiences do not bode well for the current efforts in the former Communist states of Eastern Europe or in Latin America and Africa. And the most recent report by Freedom House concludes: "As 1993 draws to a close, freedom around the world is in retreat while violence, repression, and state control are on the increase. The trend marks the first increase in five years . . ." (Karatnycky 1994:4). A "reverse wave" in the making is most apparent in sub-Saharan Africa, where "9 countries showed improvement while 18 registered a decline" (p. 6). And in Russia, a proto-fascist movement led all other parties, albeit with 24 percent of the vote, in the December 1993 elections, while the Communists and their allies secured over 15 percent.

Almost everywhere that the institutionalization of democracy has occurred, the process has been a gradual one in which opposition and individual rights have emerged in the give and take of politics, (Sklar 1987:714). As I, and my then-students Martin Trow and James Coleman, wrote almost 40 years ago:

Democratic rights have developed in societies largely through the struggles of various groupsclass, religious, sectional, economic, professional, and so on-against one another and against the group which controls the state. Each interest group may desire to carry out its own will, but if no one group is strong enough to gain complete power, the result is the development of tolerance. In large measure the development of the concept of tolerance, of recognition of the rights of groups with whom one disagrees to compete for adherents or power, arose out of conflicts among strong and indestructible groups in different societies. There were a number of processes through which tolerance became legitimate. In some situations groups such as the Catholic and the Protestant churches attempted to destroy the opposing faction, but finally recognized that the complete victory of one group was impossible or could occur only at the risk of destroying the very fabric of society. In these conflicts minority or opposition groups developed a democratic ideology, an insistence on specific minority rights, as a means of legitimating their own right to exist. These groups might then force the dominant power group to grant these rights in order to prevent a revolutionary upsurge or achieve power themselves. For them to reject their own program may then mean a considerable loss of support from adherents who have come to hold the democratic values. (Lipset, Trow, and Coleman 1956:15-16)

As a result, democratic systems developed gradually, at first with suffrage, limited by and linked to property and/or literacy. Elites yielded slowly in admitting the masses to the franchise and in tolerating and institutionalizing opposition rights (Almond and Verba 1963:7–8; Rustow 1970:357). As Dahl (1971: 36–37) has emphasized, parties such as the Liberals and Conservatives in nineteenth-century Europe, formed for the purpose of securing a parliamentary majority rather than to win the support of a mass electorate, were not pressed to engage in populist demagoguery.

Comparative politics suggest that the more the sources of power, status and wealth are concentrated in the state, the harder it is to institutionalize democracy. Under such conditions the political struggle tends to approach a zero-sum game in which the defeated lose all. The greater the importance of the central state as a source of prestige and advantage, the less likely it is that those in power—or the forces of opposition—will accept rules of the game that institutionalize party conflict and could result in the turnover of those in office. Hence, once again it may be noted, the chances for democracy are greatest where, as in the early United States and to a lesser degree in other Western nations, the interaction between politics and economy is limited and segmented. In Northern Europe, democratization let the monarchy and the aristocracy retain their elite status, even though their powers were curtailed. In the United States, the central state was not a major source of privilege for the first half-century or more, and those at the center thus could yield office easily.

Democracy has never developed anywhere by plan, except when it was imposed by a democratic conqueror, as in post-World War II Germany and Japan. From the United States to Northern Europe, freedom, suffrage, and the rule of law grew in a piecemeal, not in a planned, fashion. To legitimate themselves, governmental parties, even though they did not like it, ultimately had to recognize the right of oppositions to exist and compete freely. Almost all the heads of young democracies, from John Adams and Thomas Jefferson to Indira Gandhi, attempted to suppress their opponents. As noted before, most new democracies are soon overthrown, as in France prior to 1871, in various parts of Europe after 1848, in Eastern, Central and Southern Europe after World War I,

and repeatedly in Latin America and Africa. Democratic successes have reflected the varying strengths of minority political groups and lucky constellations, as much or more than commitments by new office holders to the democratic process.

Cross-national historical evaluations of the correlates of democracy have found that cultural factors appear even more important than economic ones (Lipset et al. 1993:168-70; see also Huntington 1991:298-311). Dahl (1970: 6), Kennan (1977:41-43), and Lewis (1993: 93-94) have emphasized that the first group of countries that became democratic in the nineteenth century (about 20 or so) were Northwest European or settled by Northwest Europeans. "The evidence has yet to be produced that it is the natural form of rule for peoples outside these narrow perimeters" (Kennan 1977:41-43).4 Lewis (1993), an authority on the Middle East, has reiterated Kennan's point: "No such [democratic] system has originated in any other cultural tradition; it remains to be seen whether such a system transplanted and adapted in another culture can long survive" (pp. 93-94).

More particularly, recent statistical analyses of the aggregate correlates of political regimes have indicated that having once been a British colony is the variable most highly correlated with democracy (Lipset et al. 1993:168). As Weiner (1987) has pointed out, beyond the experiences in the Americas and Australasia in the nineteenth century, "every country with a population of at least 1 million (and almost all the smaller countries as well) that has emerged from colonial rule and has had a continuous democratic experience is a former British colony" (p. 20). The factors underlying this relationship are not simple (Smith 1978). In the British/non-British comparison, many former British colonies, such as those in North America before the revolution or India and Nigeria in more recent times, had elections, parties, and the rule of law before they became independent. In contrast, the Spanish, Portuguese, French, Dutch, and Belgian colonies, and former Soviet-controlled countries did not allow for the gradual incorporation of "out groups" into the polity. Hence democratization was much more gradual and successful in the ex-British colonies than elsewhere; their preindependence experiences were important as a kind of socialization process and helped to ease the transition to freedom.

Religious Tradition

Religious tradition has been a major differentiating factor in transformations to democracy (Huntington 1993:25-29). Historically, there have been negative relationships between democracy and Catholicism, Orthodox Christianity, Islam, and Confucianism; conversely Protestantism and democracy have been positively interlinked. These differences have been explained by (1) the much greater emphasis on individualism in Protestantism and (2) the traditionally close links between religion and the state in the other four religions. Tocqueville (1975) and Bryce (1901) emphasized that democracy is furthered by a separation of religious and political beliefs, so that political stands are not required to meet absolute standards set down by the church.

Scholars from Tocqueville's time to the mid-1970s have observed that, among European countries and their overseas offspring, Protestant countries have been more likely to give rise to democratic regimes than Catholic ones (Lipset 1981:57-58; Lipset [1970]1988: 90; Bollen 1979:83; Huntington 1991:79-82). Pierre Trudeau (1960), writing as a political scientist in the late fifties, noted that Catholics have been closely linked to the state, adhering to a church which has been hierarchical, and "authoritarian in spiritual matters, and since the dividing line between the spiritual and the temporal may be very fine or even confused. they are often disinclined to seek solution in temporal affairs through the mere counting of heads" (p. 245). Protestants, particularly the non-state-related sects, have been less authoritarian, more congregational, participatory, and individualistic. Catholic countries. however, have contributed significantly to the third wave of democratization during the 1970s and 1980s, reflecting "the major changes in the doctrine, appeal, and social and political commitments of the Catholic Church that occurred... in the 1960s and 1970s" (Huntington 1991:281, 77-85). The changes that have occurred are primarily a result of the delegitimation of so-called ultra-rightist or clerical fascism in Catholic thought and poli-

⁴That evidence, of course, has emerged in recent years in South and East Asia, Latin America, and various countries descended from Southern Europe.

Catholic thought and politics, an outgrowth of the defeat of fascism in Europe, and considerable economic growth in many major Catholic lands in post-war decades, countries such as Italy, Spain, Quebec, Brazil, and Chile.

Conversely, Moslem (particularly Arab) states have not taken part in the third wave of democratization. Almost all remain authoritarian. Growth of democracy in the near future in most of these countries is doubtful because "notions of political freedom are not held in common . . .; they are alien to Islam" (Vatikiotis 1988:118). As Wright (1992) has stated, Islam "offers not only a set of spiritual beliefs, but a set of rules by which to govern society" (p. 133). Gellner (1991) noted that "Muslim societies in the modern world present a picture which is virtually a mirror image of Marxist ones. They are suffused with faith, indeed they suffer from a plethora of it..." (p. 506). In elaborating on the past and present relationship of Moslem beliefs to the polity, Lewis (1993) noted:

The Islamic state was in principle a theocracy—not in the Western sense of a state ruled by the Church and the clergy,... but in the more literal sense of a polity ruled by God.... In principle, the state was God's state, ruling over God's people; the law was God's law....

Not surprisingly,... the history of Islamic states is one of almost unrelieved autocracy. (pp. 96, 98)

Kazancigil (1991) has offered parallel explanations of the weakness of democracy in Islam with those for Orthodox Christian lands as flowing from their failures "to dissociate the religious from the political spheres" (p. 345). In Eastern Europe, particularly Russia, the Orthodox Church has closely linked the two. As Guroff and Guroff (1993) emphasized: "The Church has always been an organ of the Russian state, both under the Tsar and under the Soviet Union... Neither in Tsarist Russia, nor in the Soviet Union has the Orthodox Church played an active role in the protection of human rights or religious tolerance" (pp. 10–11).

Noting that in Confucian China "no church or cultural organization... existed independently of the state" (p. 25), and that "Islam has emphasized the identity between the religious and political communities," Eisenstadt (1968) stressed the resultant "important similarity between the Chinese and Islamic societies" (p.

27). Huntington (1993) reported that "no scholarly disagreement exists regarding the proposition that traditional Confucianism was either undemocratic or antidemocratic" (p. 15; see also Whyte 1992:60). Lucian Pye (1968; see also Pye with Pye 1985) has pointed to the similarities between Confucian and Communist beliefs about "authority's rights to arrogance . . . both have been equally absolute . . . upholding the monopolies of officialdom.... It is significant that . . . both Confucianism and Maoism in ideological content, have explicitly stressed the problems of authority and order" (Pye 1968:16). Though somewhat less pessimistic, He Baogang's (1992) evaluation of cultural factors in mainland China concluded that "evidence reveals that the antidemocratic culture is currently stronger than the factors related to a democratic one" (p. 134). Only Japan, the most diluted Confucian country, "had sustained experience with democratic government prior to 1990, ... [although its] democracy was the product of an American presence" (Huntington 1991:15). The others—Korea, Vietnam, Singapore, and Taiwan—were autocratic. As in the other less democratic cultures, "Confucianism merged society and the state and provided no legitimacy for autonomous social institutions at the national level" (p. 301). The situation, of course, has changed in recent years in response to rapid economic growth, reflecting the ways in which economic changes can impact on the political system undermining autocracy.

But India, a Hindu country that became democratic prior to industrialization, is different:

The most salient feature of Indian civilization, from the point of view of our discussion, is that it is probably the only complete, highly differentiated civilization which throughout history has maintained its cultural identity without being tied to a given political framework. . . . [T]o a much greater degree than in many other historical imperial civilizations politics were conceived in secular forms. . . . Because of the relative dissociation between the cultural and the political order, the process of modernization could get underway in India without being hampered by too specific a traditional-cultural orientation toward the political sphere. (Eisenstadt 1968:32)

These generalizations about culture do not augur well for the future of the third wave of democracy in the former Communist countries. The Catholic Church played a substantial role in Poland's move away from Soviet Communism. But as noted previously, historically deeply religious Catholic areas have not been among the most amenable to democratic ideas. Poland is now troubled by conflicts flowing from increasing Church efforts to affect politics in Eastern Europe even as it relaxes its policies in Western Europe and most of the Americas. Orthodox Christianity is hegemonic in Russia and Belarus. The Ukraine is dominated by both the Catholic and Orthodox Churches. And fascists and Communists are strong in Russia and the Ukraine. Moslems are a significant group in the Central Asian parts of the former Soviet Union, the majority in some—these areas are among the consistently least democratic of the successor Soviet states. Led by the Orthodox Serbians, but helped by Catholic Croats and Bosnian Moslems, the former Yugoslavia is being torn apart along ethnic and religious lines with no peaceful, much less democratic, end in sight. We are fooling ourselves if we ignore the continuing dysfunctional effects of a number of cultural values and the institutions linked to them.

But belief systems change; and the rise of capitalism, a large middle class, an organized working class, increased wealth, and education are associated with secularism and the institutions of civil society which help create autonomy for the state and facilitate other preconditions for democracy. In recent years, nowhere has this been more apparent than in the economically successful Confucian states of East Asia—states once thought of as nearly hopeless candidates for both development and democracy. Tu (1993) noted their totally "unprecedented dynamism in democratization and marketization. Singapore, South Korea, and Taiwan all successfully conducted national elections in 1992, clearly indicating that democracy in Confucian societies is not only possible but also practical" (p. viii). Nathan and Shi (1993), reporting on "the first scientifically valid national sample survey done in China on political behavior and attitudes," stated: "When compared to residents of some of the most stable, long-established democracies in the world, the Chinese population scored lower on the variables we looked at, but not so low as to justify the conclusion that democracy is out of reach" (p. 116). Surveys which have been done

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in Russia offer similar positive conclusions (Gibson and Duch 1993), but the December, 1993 election in which racist nationalists and pro-Communists did well indicate much more is needed. Democracy is not taking root in much of the former Soviet Union, the less industrialized Moslem states, nor many nations in Africa. The end is not in sight for many of the efforts at new democracies; the requisite cultural changes are clearly not established enough to justify the conclusion that the "third wave" will not be reversed. According to the Freedom House survey, during 1993 there were "42 countries registering a decline in their level of freedom [political rights and civil liberties] and 19 recording gains" (Karatnycky 1994:5).5

INSTITUTIONALIZATION

New democracies must be institutionalized, consolidated, and become legitimate. They face many problems, among which are creating a growing and more equalitarian economy: reducing the tensions with, and perhaps replacing, the old civil and military elites; and formulating workable democratic electoral and administrative systems, that rest on stable political parties (Linz and Stepan 1989; Whitehead 1989; Di Palma 1990:44-108; Huntington 1991:208-79). To deal with all the issues inherent in the institutionalization of democracy requires a book, so I limit myself here to: legitimacy, executive and electoral systems, civil society and political parties, and finally, the rule of law and economic order.

Legitimacy

Political stability in democratic systems cannot rely on force. The alternative to force is legitimacy, an accepted systemic "title to rule." Most of the northern European and British Commonwealth nations, for example, developed democratic institutions while retaining what is known as traditional legitimacy derived from a continuing monarchy. Without these institutions and traditions already present, de-

⁵ In the Freedom House survey, a country may move up or down with respect to measures of freedom without changing its status as a democratic or authoritarian system.

⁶ See Dogan (1988) for recent writings on legitimacy. See also Lipset ([1963]1979:17).

mocracy might not have developed as it did, if at all.

Weber (1946), the fountainhead of legitimacy theory, named three ways by which an authority may gain legitimacy. These may be summarized:

- (1) Traditional—through "always" having possessed the authority, the best example being the title held in monarchical societies.
- (2) Rational-legal—when authority is obeyed because of a popular acceptance of the appropriateness of the system of rules under which they have won and held office. In the United States, the Constitution is the basis of all authority.
- (3) Charismatic—when authority rests upon faith in a leader who is believed to be endowed with great personal worth, either from God, as in the case of a religious prophet or simply from the display of extraordinary talents. The "cult of personality" surrounding many leaders is an illustration of this (pp. 78–79).

Legitimacy is best gained by prolonged effectiveness, effectiveness being the actual performance of the government and the extent to which it satisfies the basic needs of most of the population and key power groups (such as the military and economic leaders) (Lipset [1960] 1981:64–70; Lipset 1979: 16–23; Linz 1978: 67–74; Linz 1988:79–85; Diamond et al. 1990:9–16). This generalization, however, is of no help to new systems for which the best immediate institutional advice is to separate the source and the agent of authority.

The importance of this separation cannot be underestimated. The agent of authority may be strongly opposed by the electorate and may be changed by the will of the voters, but the essence of the rules, the symbol of authority, must remain respected and unchallenged. Hence, citizens obey the laws and rules, even while disliking those who enforce them. This happened in post-Franco Spain where the monarchy was successfully and usefully restored, although few, if any, countries today could do the same thing. After World War II, Japan, thanks to MacArthur, made dramatic changes under the aegis of the Emperor, avoiding the error made by the Allies at the end of World War I. Following the first World War, the Allies deposed the German monarchy and supported what became the Weimar Republic. Winston Churchill strongly opposed this action, correctly anticipating that the new democratic system would be opposed by adherents of the old empire and would not command their allegiance.

Rational-legal legitimacy is weak in most new democratic systems, since the law had previously operated in the interests of a foreign exploiter or domestic dictator. Efforts to construct rational-legal legitimacy necessarily involve extending the rule of the law and the prestige of the courts, which should be as independent from the rest of the polity as possible. As Ackerman (1992:60-62) and Weingast (1993) noted, in new democracies, these requirements imply the need to draw up a "liberal" constitution as soon as possible. The constitution can provide a basis for legitimacy, for limitations on state power, and for political and economic rights. Establishing stable legitimacy, of course, takes time.

The postwar democratic regimes of the formerly fascist states, created, like the Weimar Republic, under the auspices of the conquerors clearly had no legitimacy at their outset. But they had the advantage of the subsequent postwar "economic miracles" which produced jobs and a steadily rising standard of living. These new regimes have been economically viable for over four decades. The stability of these democratic systems is also linked to the discrediting of anti-democratic right-wing tendencies—these forces were identified with fascism and military defeat.

To reiterate, if democratic governments which lack traditional legitimacy are to survive, they must be effective, or as in the example of some new Latin American and postcommunist democracies, may have acquired a kind of negative legitimacy—an inoculation against authoritarianism because of the viciousness of the previous dictatorial regimes. Newly independent countries that are postrevolutionary, post-coup, or post-authoritarian regimes are inherently low in legitimacy. Thus most of the democracies established in Europe after World War I as a result of the overthrow of the Austro-Hungarian, German, and Czarist Russian empires did not last. In 1920, 26 of the 28 European states were parliamentary democracies; by 1938 only 12 were still free (Mann 1993:2; Lee 1987). As I noted earlier, democratic successes in post-World War II Latin America and Africa were equally poor, and most recently, 1993 has witnessed a considerable decline in political rights in many new democracies. Beyond failures of economic effectiveness, it has been difficult for these countries to satisfy the many demands stimulated by cross-national reference groups and revolutionary parties. They have lacked the resources needed to win the loyalties of both popular and elite strata, and efforts at created democracy thus repeatedly broke down (Linz and Stepan 1978).

All other things being equal, an assumption rarely achieved, nontraditional authoritarian regimes are more brittle than democratic ones. By definition, they are less legitimate; they rely on force rather than belief to retain power. Hence, it may be assumed that as systems they are prone to be disliked and rejected by major segments of the population. And if they are less legitimate, there will be more resentment, more corruption, and more violations of the "rules." Regimes relying on force, low in acceptance by the population, are inherently unstable and more likely to collapse in the face of a crisis. Even rapid economic success will not keep them going, as Tocqueville noted. Autocracies, particularly in an age of democratic diffusion, face a catch-22 situation: If like in Franco's Spain, South Korea, and Chile, "they do perform in delivering socioeconomic progress, they tend to refocus popular aspirations around political goals for voice and participation that they cannot satisfy without terminating their existence" (Diamond 1989a:150; Huntington 1968:5, 41). Conversely, if autocracies fail economically, and/or socially, their lack of legitimacy will facilitate a breakdown.

The record, as in the case of the Soviet Union, seems to contradict this, since that regime remained in power for three-quarters of a century. However, a brittle, unpopular system need not collapse. Repressive police authority, a powerful army, and a willingness by rulers to use brute force may maintain a regime's power almost indefinitely. The breakdown of such a system may require a major catalytic event, a defeat in war, a drastic economic decline, or a break in the unity of the government elite. In the Soviet Union, a variety of economic and social data available before Gorbachev came to power indicated enormous weaknesses-declines in productivity and increases in mortality—that suggested serious malfunctions in the system; the size and scope of its secret police attested to low legitimacy (Feshbach 1978, 1982, 1983; Amalrik 1970; Todd 1979). What

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happened in East Berlin in 1953, in Budapest in 1956, in Prague in 1968, and in Poland on a number of occasions since 1955, could, and finally did occur in Moscow. Now, of course, we know that the most extreme critics were right. And while the situation did not produce a political breakdown until recently, it resulted in highly inefficient and relatively unproductive economies.

In contrast to autocracies, democratic systems rely on and seek to activate popular support and constantly compete for such backing. Government ineffectiveness need not spill into other parts of the society and economy. Opposition actually serves as a communication mechanism, focusing attention on societal and governmental problems. Freedom of opposition encourages a free flow of information about the economy as well as about the polity.

Weber (1946:232–34) noted that an autocrat is often less powerful than a democratic ruler. He suggested that because of the restrictions on freedom of information, the dictator may not know when his orders are ignored by bureaucrats or interest groups that oppose them. He cited as an example the failure of Frederick the Great's land reforms. The Prussian state bureaucracy and local authorities linked to the landed aristocracy simply disobeyed the new laws. And no one told Frederick. In a democracy, by contrast, the opposition and/or the press usually exposes such sabotage.

At least twice in his first few years in office, Mikhail Gorbachev made speeches noting the dysfunctional consequences of one-party regimes. In terms similar to Weber's, he pointed out that the bureaucracy ignored orders and reforms they opposed. He said this could not happen in a multi-party system. He, of course, did not advocate more parties. Rather, he called on the Soviet press and intelligentsia to fulfill the functions of communication and finger-pointing that are handled in democratic countries by the opposition (Gorbachev 1987:R24; 1988:33).

Non-traditional authoritarian regimes seek to gain legitimacy through cults of personality (e.g., Napoleon, Toussant, Diaz, Mussolini, Hitler). New autocrats lack the means to establish legal-rational legitimacy through the rule of law. Communist governments, whose Marxist ideology explicitly denied the importance of "great men" in history and stressed the role of materialist forces and "the people," were

forced to resort to charismatic legitimacy. Their efforts produced the cults of Lenin, Stalin, Mao, Tito, Castro, Ho, Kim, and others. It is interesting to note that the four Communist regimes that experienced large-scale revolt—East Germany in 1953, Hungary in 1956, Poland from 1955 to 1980, and Czechoslovakia in 1968—were also the ones with the weakest personality cults, much like the Soviet Union in 1989 to 1991.

But charismatic legitimacy is inherently unstable. As mentioned earlier, a political system operates best when the source of authority is clearly separated from the agent of authority. If the ruler and his or her policies are seen as oppressive or exploitive, the regime and its rules will also be rejected. People will not feel obligated to conform or to be honest; force alone cannot convey a "title to rule."

EXECUTIVE AND ELECTORAL SYSTEMS

Democracy can be recommended not only on moral grounds, but as ultimately facilitating systemic stability. Democracy enables the citizenry to see the polity as including all societal elements, not only those in power. The electorate becomes part of the legitimating structure. It, rather than the government, holds the ultimate authority. Members of the electorate are encouraged to work for changes in government while remaining loyal to the system. However, efforts to institutionalize freedom in low-income countries face severe difficulties inherent in the fact that new democratic rights encourage demands and actions that destabilize the economy.

As Canadian sociologist Metta Spencer (1991) has emphasized, an equally important concern is "the protection of the rights of minorities from infringement by the majority." Where minorities, particularly ethnic-linguistic-religious ones, feel they cannot share power (i.e. that they will be "invariably out voted under the conditions of majority rule"), and where they form majorities in prescribed areas, they may try to gain local autonomy or secede as a way of turning a cultural minority into a majority. This has happened in parts of former Yugoslavia and the former Soviet Union (p. 427). Democracies will lack legitimacy in the eyes of minorities who feel excluded from power. Hence, transition to electoral regimes will often destabilize multi-cultural polities, as

the situation in many post-Communist states has demonstrated. Calhoun's (1947) early nineteenth-century theory of concurrent majority and Liphart's (1977) contemporary notion of consociational systems suggest similar solutions to this problem. They proposed constitutional structures that give minorities veto power in the policy development process when their interests are affected. Efforts to do this in Cyprus and Lebanon have failed, Switzerland has apparently been successful. Canada and South Africa are currently looking for comparable arrangements. Ironically, Lani Guinier (1993:1589-1642, especially 1625-42) proposes reforms similar to Calhoun's: however. Calhoun's proposal aimed to preserve the interests of the masters, and Guinier's was intended to facilitate the demands of the descendants of their slaves.

Federalism, of course, is the oldest and in many ways the most satisfactory means to manage such conflicts between ethnic or other groups and define regional political boundaries. As Horowitz (1985:598) argued, federalism permits five different conflict reducing mechanisms to operate: (1) taking "heat off a single focal point"; (2) devolving power and office among ethnic lines; (3) offering inducements for ethnic coalitions; (4) encouraging intra-ethnic conflict within provinces, thus allowing for cross-cutting cleavages; and (5) promoting efforts to "reduce disparities between groups." But clearly federalism is no panacea. It has its failures as well as successes.

Executive Systems

In considering the relation of government structure to legitimacy it has been suggested that republics with powerful presidents will, all other things being equal, be more unstable than parliamentary ones in which powerless royalty or elected heads of state try to act out the role of a constitutional monarch. In the former, where the executive is chief of state, symbolic authority and effective power are combined in one person, while in the latter they are divided. With a single top office, it is difficult for the public to separate feelings about the regime from those held toward the policy makers. The difficulties in institutionalizing democracy in the many Latin American presidential regimes over the last century and a half may reflect this problem. The United States presents a special

case, in which, despite combining the symbolic authority and power into the Presidency, the Constitution has been so hallowed by ideology and prolonged effectiveness for over 200 years, that it, rather than those who occupy the offices it specifies, has become the accepted ultimate source of authority. This constitutional (legal-rational) legitimacy took many decades to develop. Strong secessionist efforts occurred a number of times before the Civil War (e.g., by New England states during the War of 1812, by South Carolina in 1832, and by leading abolitionists in the 1840s who rejected a Constitution that upheld slavery). The Civil War and subsequent long-term economic growth legitimated the American constitutional regime.

Linz (1990a; 1990b) and Riggs (1993) argued that parliamentary systems are preferred because executive power is dispersed within the cabinets among members of parliament who represent different groups or parties in the legislative chamber. Conversely, where power is concentrated in one person, groups with which the president is not directly involved (even within his own party) feel less loyalty to the regime and its policies. Linz has also criticized the rigidity and zero-sum character of presidential systems. He and Riggs believe that the problems inherent in presidential systems explain much of the history of recurrent democratic failure in Latin America and elsewhere.

These arguments are debatable (Lipset 1990a; Horowitz 1990). As noted, many pre-World War II parliamentary systems in Germany, Italy, Spain, and Eastern Europe collapsed. In 1958, Charles de Gaulle, attributed the instability of the Third and Fourth French Republics to multi-party parliamentary systems. These Republics produced short-lived and ineffective cabinets. To change the situation, de Gaulle introduced a complex system with a powerful president who shared power with a prime minister and the legislature. In France, these reforms have resulted in more effective and longer-lived governments. The new Yeltsin constitution adopted in December 1993 attempts a similar system for the Russian Federation.

Evaluation of the relative worth of presidential and parliamentary systems must also consider the nature of each type. In presidential regimes, the power to enact legislation, pass budgets and appropriations, and make high level appointments are divided among the

president and (usually two) legislative Houses; parliamentary regimes are unitary regimes, in which the prime minister and cabinet can have their way legislatively. A prime minister with a parliamentary majority, as usually occurs in most Commonwealth nations and a number of countries in Europe, is much more powerful and less constrained than a constitutional president who can only propose while Congress disposes (Lijphart 1984:4-20). The weak, divided-authority system has worked in the United States, although it has produced much frustration and alienation at times. But, as noted, the system has repeatedly broken down in Latin America, although one could argue that this is explained not by the constitutional arrangements, but by cultural legacies and lower levels of productivity. Many parliamentary systems have failed to produce stable governments because they lack operating legislative majorities. For instance, of the seven Eastern European countries moving away from communism, only one, Albania, has elected a majority party. In Poland, 29 parties won seats in the parliament in 1991 (Economist 1993a:5) although the number after the 1993 election was reduced to seven. Prior to the Yeltsin electoral reforms in December 1993, there were 14 organized factions, each with 48 or more deputies in the Russian Congress of People's Deputies, plus 199 deputies who did not belong to any (Economist 1993b:59). And 12 are present in the new Duma, plus about 120 independents. Whether these situations will settle down with time remains to be seen. There is no consensus among political scientists as to which system, presidential or parliamentary, is superior, since it is possible to point to many failures for both types.

Electoral Systems

The procedures for choosing and changing administrations also affect legitimacy (Lipset 1979:293–306). Elections that offer the voters an effective way to change the government and vote the incumbents out will provide more stability; electoral decisions will be more readily accepted in those systems in which electoral rules, distribution of forces, or varying party strengths make change more difficult.

Electoral systems that emphasize singlemember districts, such as those in the United States and in much of the Commonwealth, press the electorate to choose between two major parties. The voters know that if they turn against the government party, they can replace it with the opposition. The parties in such systems are heterogeneous coalitions, and while many voters frequently opt for the "lesser evil," since the opposition usually promises to reverse course, incumbents can be punished for unpopular policies or for happening to preside over depressing events.

In systems with proportional representation. the electorate may not be able to determine the composition of the government. In this type, representation is assigned to parties which corresponds to their proportions of the vote. Proportional representation was used in pre-Hitler Germany, pre-fascist Italy, and in much of Eastern Europe during the 1920s and early 1930s, and it currently exists in contemporary Israel, Italy, Germany, Scandinavia, much of eastern Europe, and the Russian Federation. Where no party has a majority, alliances may be formed out of diverse forces. A party in a government coalition may gain votes, but may then be excluded from the new cabinet formed after the election. Small, opportunistic, or special interest parties may hold the balance of power and determine the shape and policies of post-election coalitions. The tendency toward instability and lack of choice in proportional systems can be reduced by setting up a minimum vote for representation, such as the five percent cut-off that exists in Germany and Russia. In any case, electoral systems, whether based on single-member districts or proportional representation, cannot guarantee particular types of partisan results (Lipset 1979:293-306; Gladdish 1993).

CIVIL SOCIETY AND POLITICAL PARTIES

Civil Society as a Political Base

More important than electoral rules in encouraging a stable system is a strong civil society—the presence of myriad "mediating institutions," including "groups, media, and networks" (Diamond 1993b:4), that operate independently between individuals and the state. These constitute "subunits, capable of opposing and countervailing the state" (Gellner 1991:500). Forty years ago, my first major effort to analyze "the conditions that favor de-

mocracy" (Lipset, Trow, and Coleman 1956: 15) focused on civil societies, noting that "in a large complex society, the body of the citizenry is unable to affect the policies of the state. If citizens do not belong to politically relevant groups, if they are atomized, the controllers of the central power apparatus will completely dominate the society" (p. 15).

Citizen groups must become the bases of—the sources of support for—the institutionalized political parties which are a necessary condition for—part of the very definition of—a modern democracy. As Merkl (1993) reiterating Schumpeter (1950) correctly emphasized, "The major device for facilitating the formation of the popular will, its generation of meaningful choices and its impact upon government, have been political parties" (pp. 257–58) Or as Weffort (1992) puts it: "Democracy-building is a process of . . . institutionalizing conflict" (p. 111).

We owe our awareness of the importance of civil society to Tocqueville (1976) who, in the early nineteenth century, saw in the widespread existence of civil associations the secret to why Americans did so well politically and economically when compared to the European nations of his day. He noted that people

... cannot belong to these associations for any length of time without finding out how order is maintained among a large number of people and by what contrivance they are made to advance, harmoniously and methodically, to the same object... Political associations may therefore be considered as large free schools, where all the members of the community go to learn the general theory of association... (vol. 2:116)

In their political associations the Americans, of all conditions, minds, and ages, daily acquire a general taste for association and grow accustomed to the use of it. . . . [T]hey are mutually stimulated to all sorts of undertakings. They afterwards transfer to civil life the notions they have thus acquired and make them subservient to a thousand purposes. (vol. 2, 119)

A fully operative civil society is likely to also be a participant one. Organizations stimulate interests and activity in the larger polity;

⁷ Gramsci, a leading Marxist scholar, writing in the twenties, also emphasized the need for a "dense civil society" arising out of capitalism, which made democratic discourse possible (Stephens 1993:414), as more recently did Lipset (1981:52–53) and Huntington (1984:202–3).

they can be consulted by political institutions about projects that affect them and their members, and they can transfer this information to the citizenry. Civil organizations reduce resistance to unanticipated changes because they prevent the isolation of political institutions from the polity and can smooth over, or at least recognize, interest differences early on.

In a twist on Schumpeter's (1950) definition of political parties as the basis of democracy, certain democratic values and rights have evolved primarily through conflict among groups in society. Instead of struggling to attain elite political power, various groupsclass, religious, economic, professional, and the like-compete with one another and the state for popular attention, for the power to carry out their own agendas. As noted earlier, such opposition groups must legitimate themselves by encouraging the rights of other groups to oppose them, thus providing a basis for democracy. Through these conflicts and their differing ideologies, these groups form an alternative to the state and its control of society.

Totalitarian systems, however, do not have effective civil societies. Instead, they either seek to eliminate groups mediating between the individual and the state or to control these groups so there is no competition. And while by so doing they may undermine the possibility for organized opposition, they also reduce group effectiveness generally, and reduce the education of individuals for innovative activities (i.e., Tocqueville's "civil partnerships" [1976, vol. 2:124]). In the West, polities are based on a wide diversity of groups that form the basis for parties (e.g., unions, ethnic and religious groups, farm associations, veterans' organizations, etc.). Fortunately, most of the new democracies outside of the ex-Communist bloc, such as Argentina, Chile, South Korea, Taiwan, and Spain, were not totalitarian and had institutionalized some of the pluralistic institutions of civil society while under autocratic rule (Scalapino 1989). The new democracies must be encouraged to form more of these civil groups. Yet the "newly created" leaders of these interest groups more often than not only have "become . . . [favorable to democracy] during the transition period" (Weffort 1992: 12).

The countries of Eastern Europe and the former Soviet Union, however, are faced with the consequences of the absence of modern

civil society, a lack that makes it difficult to institutionalize democratic polities. These countries have not had the opportunity to form the civil groups necessary to coalesce into stable political parties, except through churches in some nations, such as Poland, and assorted small autonomous illegal networks (Sadowski 1993:171-80). Instead, they have had to create parties "from scratch." Ideologically splintered groups must oppose the former Communists, who have been well organized for many years and have constructed their own coalitions. "Instead of consolidation, there is fragmentation: 67 parties fought Poland's most recent general election, 74 Romania's" (Economist 1993a:4). As a result, the former Communists (now "socialists") have either been voted in as the majority party in parliament, as in Lithuania, or have become the largest party heading up a coalition cabinet, as in Poland, In January 1992, the Communist-backed candidate for president in Bulgaria garnered 43 percent of the vote (Malia 1992:73). These situations are, of course, exacerbated by the fact that replacing command economies by market processes is difficult, and frequently conditions worsen before they begin to improve.

Recent surveys indicate other continuing effects of 45 to 75 years of Communist rule, Anoverwhelming majority (about 70 percent) of the population in nearly all of the countries in Eastern Europe agree that "the state should provide a place of work, as well as a national health service, housing, education, and other services" (Economist 1993a:5). The success of democracy in these countries depends in large part on their populations' ability to adapt to freedom, to break away from their former views on the role of the state, and their willingness to accept the cyclical nature of the freemarket system, and of course, on successful economic performance. Garton Ash (1990), Kohák (1992) and Di Palma (1991) have written eloquently on the persistence of Communist structures and mindsets, as has Hungarian politician and scholar Tamás (1992) when he noted:

All the surveys and polling data show that public opinion in our region rejects dictatorship, but would like to see a strong man at the helm; favors popular government, but hates parliament, parties, and the press; likes social welfare legislation and equality, but not trade unions; wants to topple the present government, but disapproves of the

idea of a regular opposition; supports the notion of the market (which is a code word for Westernstyle living standards), but wishes to punish and expropriate the rich and condemns banking for preying on simple working people; favors a guaranteed minimum income, but sees unemployment as an immoral state and wants to punish or possibly deport the unemployed. (p. 73)

Political Parties as Mediators

Political parties themselves must be viewed as the most important mediating institutions between the citizenry and the state (Lipset 1993). And a crucial condition for a stable democracy is that major parties exist that have an almost permanent significant base of support. That support must be able to survive clear-cut policy failures by the parties. If this commitment does not exist, parties may be totally wiped out, thus eliminating effective opposition. The Republicans in the United States, for example, though declining sharply in electoral support, remained a major opposition party in the early 1930s, despite the fact that the Great Depression started under their rule and reached severe economic depths in unemployment, bankruptcy, and stock market instability never seen before.

If, as in new democracies, parties do not command such allegiance, they can be easily eliminated. The Hamiltonian Federalist party, which competed in the early years of the American Republic with the Jeffersonian Democratic-Republicans, declined sharply after losing the Presidency in 1800 and soon died out (Lipset 1979:40-41; Dauer 1953). In more recent post-authoritarian European polities, early democratic movements that appeared to have mass support—the Party of Action in Italy, the Union of the Democratic Center in Spain which formed a majority government in the first post-Franco election, the Civic Union in East Germany, Solidarity in Poland-were eliminated or declined greatly in early elections. As mentioned earlier, the same pattern has occurred in a number of former Soviet countries. It may be argued then, that having at least two parties with an uncritically loyal mass base comes close to being a necessary condition for a stable democracy. Democracy requires strong parties that can offer alternative policies and criticize each other. Historically, the cross-cutting cleavages of impoverished India linked to allegiances of caste, linguistic,

and religious groupings have contributed to the institutionalization of democracy by producing "strong commitment to parties" on the part of a large majority (Das Gupta 1989:95; Diamond 1989b:19). More recently, volatility and decay in the party system has been associated with a decline in the quality and stability of democracy in India (Kohli 1992).

Sources of Political Party Support

Twenty-five years ago, Stein Rokkan and I tried to systematize the structural factors underlying the diverse support base of European party systems. In Party Systems and Voter Alignments (1967), we analyzed modern political divisions in Europe as outgrowths of two revolutions, the National Revolution and the Industrial Revolution. These transformations created social cleavages that became linked to party divisions and voting behavior. The first was political, and resulted in center-periphery conflicts between the national state and culture and assorted subordinate ones, such as ethnic, linguistic, or religious groups often located in the peripheries, the outlying regions. This political revolution also led to state-church conflicts—struggles between the state, which sought to dominate, and the church, which tried to maintain its historic corporate rights. The Industrial Revolution was economic and gave rise to land-industry conflicts between the landed elite and the growing bourgeois class. This was followed by the capitalist-worker conflicts-the struggles on which Marx focused.

These four sources of conflict, center-periphery, state-church, land-industry, and capitalist-worker, have continued to some extent in the contemporary world, and have provided a framework for the party systems of the democratic polities, particularly in Europe. Class became the most salient source of conflict and voting, particularly after the extension of the suffrage to all adult males (Lipset and Rokkan 1967). Both Tocqueville (1976:vol. 2, 89–93), in the early nineteenth century and Bryce (1901:335), at the end of it, noted that at the bottom of the American political party conflict lay the struggle between aristocratic and democratic interests and sentiments. The partisan expressions of the four cleavage models obviously have varied greatly internationally (Lipset 1988:227-66, 1985:187-252). They have been fully expressed in multi-party systems and condensed into broad coalitions in two-party ones like those in the United States or Australia. Given all the transformations in Western society over the first half of the twentieth century, it is noteworthy how little the formal party systems changed. Essentially the conflicts had become institutionalized—the Western party systems of the 1990s resemble those of pre-World War II. The main changes relate to the rise and disappearance of fascist movements and, in some countries, to the division of the working-class parties into two major ones prior to the collapse of Communism. These working-class parties, of course, were much stronger in the post-World War II political arenas than earlier. In recent decades, all the Social Democrats and most of the muchweakened Communists have changed ideological direction, giving up advocacy of state ownership in favor of market-driven economies (Lipset 1991).

Beginning in the mid-1960s, the Western world appears to have entered a new political phase. It is characterized by the rise of socalled "post-materialistic issues, a clean environment, use of nuclear power, a better culture, equal status for women and minorities, the quality of education, international relations, greater democratization, and a more permissive morality, particularly as affecting familial and sexual issues" (Lipset 1981:503-21). These have been perceived by some social analysts as the social consequences of an emerging third "revolution," the Post-Industrial Revolution, which is introducing new bases of social and political conflict. Inglehart (1990) and others have pointed to new cross-cutting lines of conflict-an industrial-ecology conflict-between the adherents of the industrial society's emphasis on production (who also hold conservative positions on social issues) and those who espouse the post-industrial emphasis on the quality-of-life and liberal social views when dealing with ecology, feminism, and nuclear energy. Quality-of-life concerns are difficult to formulate as party issues, but groups such as the Green parties and the New Left or New Politics-all educated middle class groupshave sought to foster them.

Stable party-social cleavage relationships recurred in the post-fascist systems, as well as in more recent post-authoritarian democracies like Spain and Chile, but as mentioned earlier,

not as yet in most post-Communist "democracies," with the possible exception of Hungary. The ex-Communists have reassembled as "socialist" parties, while the non-Communists formed a variety of unstable liberal (laissezfaire), populist-nationalist, regional, and religiously-linked parties. The latter lack consistent ideologies or ties to fixed segments or strata in society, social classes in particular. The one traditional basis of party differentiation that seems clearly to be emerging in Russia is the center-periphery conflict, the first one that developed in Western society. The second, church-state (or church-secular), is also taking shape to varying degrees. Land-industry (or rural-urban) tension is somewhat apparent. Ironically, the capitalist-worker conflict is as yet the weakest, perhaps because a capitalist class and an independently organized working-class do not yet exist. Unless stable parties can be formed, competitive democratic politics is not likely to last in many of the new Eastern European and Central Asian polities. There is, however, some evidence of a trend toward consolidation in Hungary and Poland.

THE RULE OF LAW AND ECONOMIC ORDER

Finally, order and predictability are important for the economy, polity, and society. The Canadian Fathers of Confederation, who drew up the newly unified country's first constitution in 1867, described the Constitution's objective as "peace, order, and good government" (Lipset 1990b:xiii). Basically, they were talking about the need for the "rule of law," for establishing rules of "due process," and an independent judiciary. Where power is arbitrary, personal, and unpredictable, the citizenry will not know how to behave; it will fear that any action could produce an unforeseen risk. Essentially, the rule of law means: (1) that people and institutions will be treated equally by the institutions administering the law—the courts, the police, and the civil service; and (2), that people and institutions can predict with reasonable certainty the consequences of their actions, at least as far as the state is concerned. As the World Bank (1991) has emphasized: "The rule of law is a key element of predictability and stability where business risks may be rationally assessed, transaction costs lowered, and governmental arbitrariness reduced" (p. iii). Here,

once again, we see the needs of the polity and economy as joined.

In discussing "the social requisites of democracy," I have repeatedly stressed the relationship between the level of economic development and the presence of democratic government. As noted, a host of empirical studies has continued to find significant correlations between socioeconomic variables (such as GNP, educational attainments, level of health care) on the one hand, and political outcomes (such as free polities and human rights) on the other. (Lipset et al. 1993; Diamond 1992a; Inkeles 1991; Bollen and Jackman 1985a; Bollen and Jackman 1985b; Bollen 1979; 1980; Flora 1973; Flanigan and Fogelman 1971; Olsen 1968; Neubauer 1967; Cutright 1963).

Some of the countries that have moved toward democracy in recent years exemplify the implications of the economic development model (e.g., Chile, Spain, South Korea, and Taiwan). Prior to democratization, they moved up rapidly on economic and human welfare measures. But the relationship between the economy and human welfare is far from consistent (Lipset, et al. 1993). The characteristics of the most populous democracy in the world, India, contradict this relationship, as do those of Botswana, Papua New Guinea, and Sri Lanka. The diffusion of democracy to some poor Less Developed Countries in recent years also undermines the correlation, although this has happened in large part due to the end of a bi-polar world—Third-World dictators can no longer take advantage of the tension between the Soviet Union and the West (on diffusion, see Di Palma 1990:15-21).

Clearly, socioeconomic correlations are merely associational, and do not necessarily indicate cause. Other variables, such as the force of historical incidents in domestic politics, cultural factors, events in neighboring countries, diffusion effects from elsewhere, leadership and movement behavior can also affect the nature of the polity. Thus, the outcome of the Spanish Civil War, determined in part by other European states, placed Spain in an authoritarian mold, much as the allocation of Eastern Europe to the Soviet Union after World War II determined the political future of that area and that Western nations would seek to prevent the electoral victories of Communistaligned forces. Currently, international agencies and foreign governments are more likely to endorse pluralistic regimes.

Karl and Schmitter (1991:270-71) argued that the search for democratic prerequisites is misguided. They accounted for democratic transitions by observing the pact-making process of political regimes and parties. Karl contended, "Rather than engage in a futile search for new preconditions, it is important to clarify how the mode of regime transition (itself conditioned by the breakdown of authoritarian rule) sets the context within which strategic interactions can take place because these interactions, in turn, help to determine whether political democracy will emerge and survive . . ." (Karl 1990:19).

Karl and Schmitter (1991) viewed the analysis of the behavior of elites in constructing pacts as mutually exclusive from the study of democratic prerequisites. I disagree. Social requisite analysis is concerned with the foundations for successful democratic consolidation. Since pacts are one means of institutionalizing democracy, whether they emerge or hold is linked to probabilities associated with the presence or absence of these requisites. As Weffort (1992) emphasized, "The minimal procedural working of a political democracy implies certain minimal social conditions" (p. 18). Thus, it is not necessary to make an "either-or" choice between the study of democratic conditions and pact-building-they are complementary.

CONCLUSION

Democracy is an international cause. A host of democratic governments and parties, as well as various non-governmental organizations (NGOs) dedicated to human rights, are working and providing funds to create and sustain democratic forces in newly liberalized governments and to press autocratic ones to change (Economist 1993c:46). Various international agencies and units, like the European Community, NATO, the World Bank, and the International Monetary Fund (IMF), are requiring a democratic system as a condition for membership or aid. A diffusion, a contagion, or demonstration effect seems operative, as many have noted, one that encourages democracies to press for change and authoritarian rulers to give in. It is becoming both uncouth and unprofitable to avoid free elections, particularly in Latin America, East Asia, Eastern Europe, and to some extent in Africa (Ake 1991:33). Yet the proclamation of elections does not ensure their integrity. The outside world can help, but the basis for institutionalized opposition, for interest and value articulation, must come from within.

Results of research suggest that we be cautious about the long-term stability of democracy in many of the newer systems given their low level of legitimacy. As the Brazilian scholar Francisco Weffort (1992) has reminded us, "In the 1980s, the age of new democracies, the processes of political democratization occurred at the same moment in which those countries suffered the experience of a profound and prolonged economic crisis that resulted in social exclusion and massive poverty.... Some of those countries are building a political democracy on top of a minefield of social apartheid . . ." (p. 20). Such conditions could easily lead to breakdowns of democracy as have already occurred in Algeria, Haiti, Nigeria, and Peru, and to the deterioration of democratic functioning in countries like Brazil, Egypt, Kenya, the Philippines, and the former Yugoslavia, and some of the trans-Ural republics or "facade democracies," as well as the revival of anti-democratic movements on the right and left in Russia and in other formerly Communist states.

What new democracies need, above all, to attain legitimacy is efficacy—particularly in the economic arena, but also in the polity. If they can take the road to economic development, it is likely that they can keep their political house in order. But as I have tried to show. the strains flowing from economic growth may undermine democratic stability. As Diamond (1992b) noted in his writings on Africa, comments that apply to much of the former Communist lands as well: "How can structural adjustment [in the economy], which imposes so much short-term pain . . . , be reconciled with democracy?" (p. 41). And some argue that perestroika (economic and social reform) must precede glasnost (political freedom). They contend that perestroika is more possible without the latter, in impoverished lands.

I conclude on a methodological note. Part of my discussion has sought to draw conclusions from the experiences and/or structural traits of democratizing countries that emphasize the correlations between democracy and economic

growth and changes in stratification. But as I have noted, there are many other relationships. Given the multivariate nature of whatever causal nexus is suggested, it is inevitable that any given variable or policy will be associated with contradictory outcomes. Huntington (1991:37-38) reports that the democratization literature includes 27 independent explanatory variables. An appropriate analogy is with the field of medicine, where probability statistics based on thousands of individuals cannot tell the physician what to do in a given case. Even our most obvious generalizations concerning the beneficent effects of economic development need not work in a particular country. We know that development efforts, projects that disrupt the life styles and the social relationships of people and change levels of expectation, as a result, may make people vulnerable to recruitment by extremist movements, religious or secular. As noted, Tocqueville (1976) in studying the French Revolution foreshadowed Gorbachev's experiences in the recent Soviet upheaval, in concluding that a political system may break down precisely when conditions are improving as a result of rising expectations and the undermining of traditional beliefs and loyalties (vol. 1, 6–13).

The profusion of empirical, historical, and comparative work since World War II, and especially the research in recent years, has added considerably to our understanding of the conditions for democracy. There are a number of assertions we can now advance, with considerable confidence, about the structural, cultural, and institutional factors that are conducive to the development of democracy. But specific outcomes depend on particular contexts: on whether the initial electoral and other political institutions are appropriate to the ethnic and cleavage structures of the given country, on the current state of the economy, as well, of course, on the abilities and tactics of the major actors. For example, Washington and Lincoln, Lenin and Gorbachev, Nehru and DeGaulle, each had a profound effect on the prospects for democracy in his time and country.

Clearly then, we cannot generalize by a formula. The various factors I have reviewed here do shape the probabilities for democracy, but they do not determine the outcomes. The record of social scientists as futurologists is not good. Dahl (1971:208) and Huntington (1984), two of the leading explicators of the structural

conditions approach, were extremely pessimistic about the prospects for more polyarchies or democracies prior to Gorbachev's rise to power. This is very similar to the failure of most Sovietologists to anticipate the collapse of the U.S.S.R. (Lipset and Bence Forthcoming). Whether democracy succeeds or fails continues to depend significantly on the choices, behaviors, and decisions of political leaders and groups.

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CHANGES IN THE SEGREGATION OF WHITES FROM BLACKS DURING THE 1980s: SMALL STEPS TOWARD A MORE INTEGRATED SOCIETY*

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Residential segregation between blacks and whites persists in urban America. However, evidence from the 1990 Census suggests that peak segregation levels were reached in the past. We evaluate segregation patterns in 1990 and trends in segregation between 1980 and 1990 for the 232 U.S. metropolitan areas with substantial black populations. We review the historical forces that intensified segregation for much of the twentieth century, and identify key developments after 1960 that challenged institutionalized segregation. The results suggest that the modest declines in segregation observed during the 1970s continued through the 1980s. While segregation decreased in most metropolitan areas, the magnitude of these changes was uneven. Testing hypotheses developed from an ecological model, we find that the lowest segregation levels in 1990 and the largest percentage decreases in segregation scores between 1980 and 1990 occurred in young, southern and western metropolitan areas with significant recent housing construction. Because the black population continues to migrate to such areas, residential segregation between blacks and whites should decline further, but remain well above that for Hispanics or Asians.

yrdal (1944:618-22) argued that racial residential segregation was a key factor accounting for the subordinate status of blacks. Segregation ensured that blacks would not attend school or share other community-based facilities with whites; it also permitted prejudiced white officials to provide deficient services to blacks without harming whites. Massey and Denton (1993) contend that an American apartheid system persists and that residential segregation is the seldom discussed missing link that explains poverty among blacks and the development of the black underclass. As Bobo (1989:307) put it, racial residential segregation is the "structural linchpin" of American race relations.

In the 1950s and 1960s, researchers reported that blacks were segregated from whites in cities throughout the nation; they described the process whereby neighborhoods changed from white to black occupancy within a few years (Duncan and Duncan 1957; Taeuber and Taeuber 1965). Later investigations sought to determine whether civil rights legislation, especially the Fair Housing Act of 1968, reduced segregation. Massey and Denton's (1987, 1988, 1989) studies of the 1970s found that, while some declines occurred in small metropolises, the fundamental pattern remained. Indeed, 16 metropolises for which segregation was extreme on every dimension were termed "hypersegregated" (Massey and Denton 1989).

This study extends previous work in two ways: Trends in residential segregation between blacks and whites for the 1980 to 1990 period are examined; and all metropolitan areas with substantial black populations are considered.

While many of the conditions that fostered segregation persist, there are reasons to expect considerable variation across metropolitan areas in the level of segregation and also reasons to anticipate further reductions in many areas. Changes in segregation should reflect reduced discrimination in housing, economic gains among blacks, and more tolerant attitudes among whites. Lessening segregation is a legacy of the civil rights movement. More-

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over, recent migration patterns show blacks moving to new and small urban areas that lack the history of housing discrimination typical of the classic "hypersegregated" areas (Frey 1993).

EXPLANATIONS OF SEGREGATION

Taeuber and Taeuber (1965:70–77) used human ecology as a framework to stress that a city's structural characteristics in conjunction with demographic forces explain levels and trends in segregation. Independent variables included growth rates of the black and white populations, suburbanization, new housing construction, and the occupational status of blacks. The ecological tradition recognizes that the history of a metropolitan area's migration, housing stock, and employment powerfully influence the racial and socioeconomic configuration of its population and its neighborhoods (Hawley 1971).

Although Massey and Denton's (1987, 1988, 1989) analyses of 59 metropolises included several ecological variables—identified as "metropolitan context" variables—their model stressed that spatial assimilation was an outcome of a minority group's economic mobility and acculturation. However, their results showed that upward economic mobility and acculturation did not lead to spatial assimilation for blacks as it did for Latinos and Asians.

Our analysis emphasizes the ecological perspective that is often used to study the distribution of racial and socioeconomic groups (Taeuber and Taeuber 1965; Schnore 1965; Frey and Speare 1988). This perspective is particularly appropriate because we seek to identify variations across the 232 metropolitan areas with substantial black populations in 1990—places that differ widely in historical development. We contend that the civil rights movement has greatly altered the effects of a metropolitan area's ecological characteristics on segregation since the 1940s and 1950s. To understand the new pattern of declining segregation, the forces that established the first ghettos, which emerged between 1900 and World War II, must be considered. These forces differ from those fostering segregation in the "Second Ghetto" (Hirsch 1983), i.e., the necklace of white suburbs surrounding predominantly black central cities that appeared after World War II.

We focus on changes in the residential segregation between blacks and whites in the 1980s, describing trends and then seeking to account for them. Because the national trend toward less segregation is the outcome of changes in many areas, we analyze intermetropolitan differences (i.e., why are blacks more segregated from whites in Detroit and Chicago than they are in Sacramento or Riverside?). This approach highlights the local conditions that ameliorate the pattern of American apartheid. Trends in the segregation of Asians and Latinos have been evaluated elsewhere (Frey and Farley 1993; Lobo 1993).

THE DEVELOPMENT OF THE FIRST GHETTOS

Residential segregation of blacks was less extreme at the turn of the century. In northern cities, some blacks shared neighborhoods with poor immigrants from Europe. Studies of Cleveland (Kusmer 1976:chap. 2), Chicago (Spear 1967:chap. 1), Detroit (Zunz 1982:chap. 6) and Philadelphia (DuBois [1899] 1967: frontispiece) reported that few blocks were predominantly black and that tiny cadres of highly educated blacks lived among whites in prosperous neighborhoods. In southern cities, clusters of blacks living with poor whites occurred. while some members of the small black elite also lived among whites (Gatewood 1990:65-66; Green 1967:127; Kellogg 1977; Rabinowitz 1976).

In the age of social Darwinism, whites desired to maintain physical distance from blacks, so a system of segregation had to be imposed, a system that had not been imposed on immigrants from Europe. Although the strategies accomplishing this varied by region and place, the outcome was similar. Southern cities passed ordinances specifying where blacks or whites could live. However, the NAACP successfully fought these ordinances, and in *Buchanan v. Warley* (1917), the Supreme Court ruled that these laws violated the rights of property owners (Johnson 1943:175–78; Vose 1959).

During World War I, competition for urban space emerged as blacks, for the first time, moved to northern and midwestern cities in large numbers. One strategy for keeping blacks out of white neighborhoods was to firebomb the homes of blacks who moved in. The Chicago Commission on Race Relations (1922:

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122-35) described 58 firebombings on that city's South Side between 1917 and 1921.

The economic changes of World War I led to the growth of a black middle class in northern cities, and in the 1920s, some sought better homes in white neighborhoods. The most famous racial litigation of that decade involved the two highly publicized trials of Dr. Ossian Sweet, a black physician who moved into a white neighborhood on Detroit's east side—a move that led to violence and one fatality. The death resulted when Dr. Sweet's brother fired a gun to disperse the hostile crowd attacking the house. Clarence Darrow won an acquittal for Dr. Sweet, thereby establishing the right of blacks to defend their property. Rather than fostering integration, however, the trials revealed the hostilities blacks faced when they tried to leave the ghetto (Canot 1974:300-303; Capeci 1984:6-7; Levine 1976:163-65; Thomas 1992: 137-39).

A subtler way to prevent integration was to add a restrictive covenant to a deed specifying that the property could not be occupied by a black, Asian, or other undesirable minority for a specified period of time (e.g., 99 years). The legality of such covenants was upheld by the Supreme Court (Corrigan v. Buckley 1926). Although there is no systematic study of the prevalence of restrictive covenants, they were common in housing developments of the World War I era and were adopted in older neighborhoods when black in-migration appeared likely. President Truman's Committee on Civil Rights, for example, estimated that by the 1940s, 80 percent of the residential land in Chicago was covered by such covenants (Committee on Civil Rights 1947:68-69).

In the 1930s, the Federal Government became directly involved in preserving racially homogeneous neighborhoods. The Federal Housing Administration (FHA) developed the modern mortgage, which enabled middle- and low-income families to become homeowners. The FHA encouraged local authorities to draw color-coded maps indicating the credit-worthiness of neighborhoods. The condition of a property was to be taken into account, but, operating on the assumption that racial transitions lowered home values drastically, racially mixed neighborhoods, regardless of economic status or stability, and neighborhoods likely to undergo racial transition were coded red on these maps. These practices influenced lending long after World War II (Jackson 1985:185-86).

THE SECOND GHETTO: THE EMERGENCE OF SEGREGATED SUBURBS

Numerous opportunities to reduce segregation arose after World War II. Few homes were constructed during the Depression or war years, but between 1945 and 1980, 29 million new homes and apartments were added to the national housing stock, which totaled 37 million units in 1940 (U.S. Bureau of the Census 1943:table 2; 1975:table N-156). In this period, the nation invaded and conquered a "crabgrass frontier" (Jackson 1985). The pattern differed by region as relatively more new housing was built in the South and West. If blacks had been allowed to move into these new homes, the nation's racial history would have been quite different. And there was reason to think this might happen. The NAACP and its allies, after much litigation, convinced the Supreme Court to rule that neither state nor Federal courts could enforce restrictive covenants (Shellev v. Kraemer 1948).

However, residential segregation persisted so thoroughly that, following the riots of the 1960s, the Kerner Commission warned that the nation was divided "into two societies; one largely Negro and poor, located in the central cities; the other, predominantly white and affluent, located in the suburbs" (National Advisory Commission on Civil Disorders 1968:22)

Four practices exacerbated segregation:

- (1) Mortgage lending policies were discriminatory. New construction was encouraged by several federal agencies: The FHA and the Veterans' Administration insured mortgages and Federal National Mortgage Association (Fannie Mae) created an orderly secondary market for them, thereby increasing the flow of capital to construction. Redlining was strongly endorsed by the Federal agencies, and the ethical standards of the National Association of Real Estate Boards prohibited its agents from introducing minorities into white neighborhoods (McEntire 1960:245).
- (2) Blacks who sought housing in white areas faced intimidation and violence similar to that occurring during World War I. Hirsch (1983) described many instances of whites stoning the houses and cars of blacks who dared to pioneer

in Chicago's white neighborhoods or the adjoining suburb of Cicero. Similar attacks occurred in other cities, but violence abated when whites realized that they could move to new homes—bought with government-backed loans—in the suburbs (Dodson 1960:107; Thompson, Lewis, and McEntire 1960:63).

(3) After World War II, suburbs developed strategies for keeping blacks out. In the Northeast and Midwest, central cities were surrounded by many individual municipalities, each with its own zoning laws, school system, and police. The techniques for excluding blacks have been documented most completely for Dearborn, Michigan (Good 1989) and Parma, Ohio (U.S. v. City of Parma 1981). Both cities established reputations for strong hostility toward blacks. Real estate agents dealt only with whites. In Dearborn, the few blacks who moved into a white neighborhood were visited by the police and encouraged to leave. Zoning ordinances were changed and variances granted or denied to prevent construction that might be open to blacks. Public schools hired white teachers, administrators, and coaches. As a result, in most midwestern and eastern metropolitan areas, white families who wished to leave a racially changing city could choose from a variety of suburbs knowing their neighbors would be white and that their children would attend segregated schools.

(4) Federally sponsored public housing encouraged segregation in many cities. As conceived in the 1930s, public housing was to provide temporary shelter for poor families as they moved into the middle class. By the early 1960s, however, public housing had become the home of last resort for problem families, particularly families headed by impoverished black women with children (Friedman 1967). Rainwater (1970:chap. 1) described public housing as the racially segregated dumping ground for such families. Federal spending for urban renewal razed old homes occupied by blacks, especially in eastern and midwestern cities. Instead of dispersing this displaced population to the suburbs, public housing was constructed, further concentrating blacks in black neighborhoods (Adams, Bartelt, Elesh, Goldstein, Kleniewski, and Yancey 1991:109-11; Bickford and Massey 1991; Hirsch 1983: 223-27; Lemann 1991:74; Squires, Bennett, McCourt, and Nyden 1987:103). These four factors-Federal financing policies, the threat of intimidation or violence, suburban opposition to blacks, and public housing—affected areas differently, but each factor maintained segregation. At this time, most cities had few Latinos or Asians.

CHALLENGING RACIAL RESIDENTIAL SEGREGATION, 1960 TO 1990

The 1960s mark a crucial turning point in race relations. Old policies were challenged and replaced by new policies that eventually produced modest declines in segregation. The local impact of national changes depended on the ecological characteristics of specific metropolitan areas.

Changes in Federal Housing Policies

Throughout this century, civil rights organizations fought local ordinances and Federal policies that encouraged or mandated segregation. In the 1960 presidential campaign, Kennedy vowed to end racial discrimination in housing with the "stroke of a pen," but civil rights groups pressured him for almost two years before he issued a timid Executive Order banning discrimination, but exempting all existing housing and all new housing except that built or directly financed by the Federal Government (Branch 1988:679). The Fair Housing Law of 1968 was the major achievement of the civil right movement, but its enactment depended on the murder of Rev. Dr. Martin Luther King. This legislation was upheld and strengthened by Federal court decisions outlawing segregation in all aspects of the sale or rental of housing (Jones v. Alfred H. Mayer 1968; U.S. v. Mitchell 1971; Zuch v. Hussey 1975).

Although enforcement by Federal agencies was often lax (Lamb 1984:172), the open housing movement was bolstered by subsequent developments in residential finance. By the 1970s, institutionalized patterns of discrimination in lending were first documented and challenged. Congress passed the Home Mortgage Disclosure Act (HMDA), which proved to be a potent "freedom of information" tool since it required federally chartered fiscal institutions to report exactly where they made or denied loans. Later, the Act's value to the open housing movement was increased by requiring information about the income and race of those obtaining or denied mortgages (Fishbein 1992;

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Carr and Megbolugbe 1993: 3–18). Studies in Atlanta (Dedman 1988), Detroit (Blossom, Everett, and Gallagher 1988), and other cities demonstrated that banks loaned more frequently in white neighborhoods than in economically similar black neighborhoods. (For other studies of lending discrimination see Avery and Buynak 1981; Bradbury, Case, and Dunham 1989; Feins and Bratt 1983; Leahy 1985; Pol, Guy, and Bush 1982; Shlay 1988; Taggert and Smith 1981; Wienk 1992.)

In 1977, urban development groups encouraged Congress to pass the Community Reinvestment Act (CRA), which required federally chartered banks and savings institutions to meet the credit needs of the *entire* communities they served, including low-income areas. Local groups challenged bank mergers in the 1980s, contending they did not satisfy their CRA obligations. In Atlanta, studies linking HMDA and CRA information led to the creation of a pool of \$65 million for loans to low-and moderate-income inner city neighborhoods (Robinson 1992:104), presumably helping to stabilize neighborhoods that might go through the usual racial transition.

The open housing movement kept the issue of discrimination before the public (Saltman 1978, 1990). In 1977, the Department of Housing and Urban Development (HUD) carried out the first national audit of discrimination in the marketing of housing (Wienk, Reid, Simonson, and Eggers 1979). Twelve years later, a similar HUD audit concluded "blacks and Hispanics experience systematic discrimination in terms and conditions, financing assistance, and general sales effort in about half of their encounters with real estate agents" (Turner 1992; Turner, Struyk, and Yinger 1991:43). The Federal Reserve Board investigated discrimination in lending using the newly augmented HMDA data. A Boston study found that 10 percent of the applications for conventional mortgages by whites were denied, whereas blacks and Latinos with comparable financial and demographic characteristics had a rejection rate of 18 percent (Munnell, Browne, McEneaney, and Tootell 1992:table 8).

A Supreme Court decision (Hills v. Gautreaux 1976) established the principle that public housing could not encourage or perpetuate segregation, but this was something of a hollow victory for the open housing movement. Although Federal judges ordered scattered site

public housing, few units were built because of the opposition of local residents and the lack of Federal funds (Chandler 1992). In some areas, voucher plans, rent supplements, and Section 8 grants assisted low-income households. Although the evidence is mixed, such policies apparently encouraged some residential integration, as did the Gautreaux demonstration program in Chicago (Davis 1993; Gray and Tursky 1986; Lief and Goering 1987:246; Rosenbaum and Popkin 1991; Rosenbaum 1992; Rosenbaum, Popkin, Kaufman, and Rubin 1991; Stucker 1986:259).

Changes in the Racial Attitudes of Whites

Because segregation resulted from the unwillingness of whites to remain when blacks moved into their neighborhoods and from the reluctance of whites to move into areas that had black residents, integration presumably depended on a liberalization of white attitudes. In the early national samples, whites strongly endorsed the principle of residential segregation. As part of the government's domestic intelligence effort at the outset of World War II, the National Opinion Research Center (NORC) asked a sample of 3,600: "Do you think there should be separate sections in towns and cities for Negroes to live in?" Eighty-four percent agreed (National Opinion Research Center 1942:question 22). Since the early 1960s, NORC has asked white respondents whether they agree or disagree with the statement, "White people have a right to keep blacks out of their neighborhoods if they want to, and blacks should respect that right." Just before the Civil Rights Act became law in 1964, 60 percent of white respondents agreed; by 1990, only 20 percent of white respondents agreed (National Opinion Research Center 1990:item 127B; Schuman, Steeh, and Bobo 1985:table 3).

Endorsing a principle is easier than accepting black neighbors. Changes in the attitudes of whites involve more than principles. In 1958, a Gallup poll found that 44 percent of a national sample of whites would leave if a black moved next door. When the question was last asked in 1978, only 14 percent said a black neighbor would trigger their flight (Bobo, Schuman, and Steeh 1986; Schuman, Steeh, and Bobo 1985:table 3.3).

In 1990, Detroit was the most segregated of the 47 metropolises with populations of 1 million or more. In 1976 and 1992, the Detroit Area Study investigated whites' tolerance for black neighbors (Farley, Schuman, Bianchi, Colasanto, and Hatchett 1978; Farley, Steeh, Jackson, Krysan, and Reeves 1994). White respondents were interviewed in their homes and shown cards depicting neighborhoods with varying racial compositions. They were asked to imagine that they lived in an all-white neighborhood as pictured on the first card. Then they were asked to imagine that a black family moved in so that their neighborhood came to resemble a second card showing 14 white households and 1 black household. The respondent was asked how comfortable he or she would be in that neighborhood. If they said "comfortable," they were shown a third card picturing 12 white households and 3 black households. If they were comfortable with this racial composition, they were shown a fourth and possibly a fifth card with relatively more blacks. The final card portrayed a majority black area. If the white respondent claimed to be "uncomfortable" with a racial mix, the respondent was asked whether he or she would try to move away from that neighborhood.

Figure 1 presents the results of their studies for 1976 and 1992 (Farley et al. 1978; Farley et al. 1994). In both years, as the percentage black increased, the percentage of whites who would feel uncomfortable increased. However, white respondents' tolerance of black neighbors increased between 1976 and 1992. The situation of one black and 14 whites made 24 percent of whites "uncomfortable" in 1976 compared to 16 percent in 1992. For the diagram with three black households, the percent "uncomfortable" fell from 42 to 30.

Few whites said they would try to move away from a neighborhood with one black household—7 percent in 1976 and 4 percent in 1992. When 5 of the 15 households were occupied by blacks, a substantial exodus provoking resegregation could occur—29 percent of white respondents in 1992 said they would try to leave. However, 41 percent said they would leave such a neighborhood in 1976.

Are whites willing to move into neighborhoods already occupied by blacks? The answer depends on the number of blacks. In 1992, 87 percent of white respondents said they would move into a neighborhood with 1 black and 14 white households if they found a nice house they could afford; almost 70 percent would

move into a neighborhood with 3 black households and 12 white. However, whites' tolerance for black neighbors had a limit—when the number of black households increased to 5 out of 15 or 8 out of 15, the neighborhood was not attractive to a majority of whites in both the 1976 and 1992 studies.

Changes in whites' attitudes during and after World War II may have facilitated passage of civil rights laws in the 1960s. These statutes—along with Supreme Court rulings upholding them—may have further liberalized attitudes. However, changes in attitudes do not necessarily mean changes in behavior in the housing market. Nevertheless, by 1990, whites almost universally supported the *principle* of equal opportunities in the housing market and a majority of whites reported a willingness to live in integrated situations.

New Housing Construction

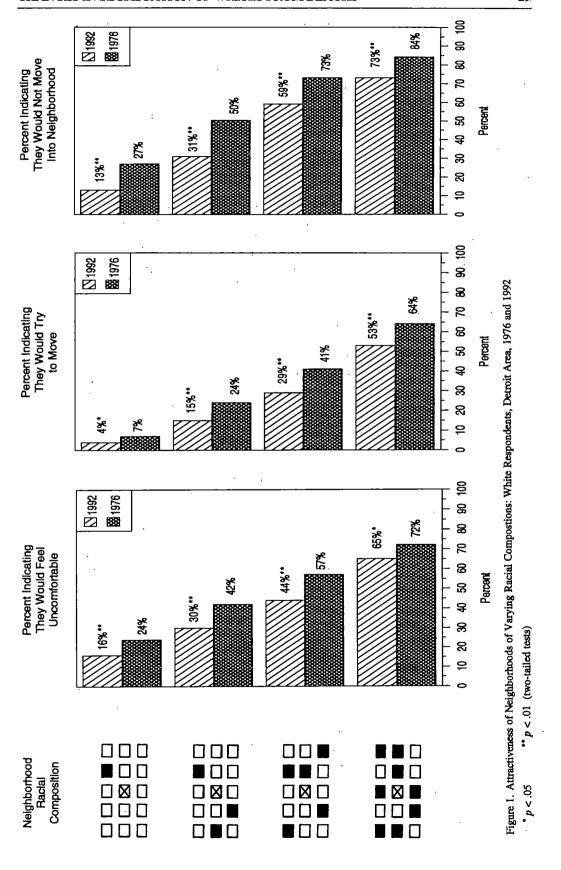
In the 1940s, new construction in a city was associated with increasing segregation because it enabled whites to distance themselves from blacks (Taeuber and Taeuber 1965:table 16), but construction after 1968 reduced segregation. We argue that the Fair Housing Act had a greater effect in newly constructed suburban developments and apartment complexes than in established neighborhoods. Many old communities are known as places where only blacks live or for their hostility to blacks (e.g., Dearborn and Parma). Areas of new construction generally lack such reputations.

Open housing advocates often target such developments for testing and, since 1972, HUD regulations have required that developers using government-backed loans affirmatively market their properties, meaning they are sometimes advertised in the black-oriented media (Lief and Goering 1987:238). The 1970s and 1980s were decades of substantial new construction—an average of 1.8 million units were started annually in the 1970s and 1.5 million per year in the 1980s (U.S. Bureau of the Census 1991b:table 1269).

Growth of the Black Middle Class

Theories of residential assimilation stress that a group's economic success hastens its residential integration. Duncan and Duncan (1957: 240-45) found that relatively more prosperous

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blacks were the first to move into white neighborhoods; Taeuber and Taeuber (1965:76) showed that the greater the increase in the occupational status of blacks in a city in the 1950s, the smaller the increase in segregation.

Between 1940 and the early 1970s, the black middle class grew more rapidly than the white middle class. Using an income of at least twice the poverty line as the criterion for middle-class status, the percent of black households rose from a miniscule 1 percent in 1940 to 39 percent in 1970. Among white households, the percent middle class increased from 12 percent to 70 percent. The growth of the middle class slowed after 1970: by 1990, 47 percent of black households and 74 percent of white households had incomes at least double the poverty line (U.S. Bureau of the Census 1972, 1982, 1993).

Recently, as is true for whites, the income distribution of blacks has become more polarized. That is, relatively more households are located at both high- and low-income extremes. In 1968, 5 percent of black households had incomes exceeding \$50,000 (constant 1990 dollars) compared to 12.5 percent in 1990. Among white households, the shift was from 15 percent with incomes above \$50,000 in 1968 to 28 percent in 1990 (U.S. Bureau of the Census 1991a:table B-10). Thus, the percentage of blacks with economic status qualifying them for expensive housing and, presumably, with characteristics mitigating white flight, increased during the 1980s.

These four developments—changes in Federal housing policies, liberalization of white attitudes toward blacks, growth of the black middle class, and substantial new housing construction—set the stage for reducing segregation. However, the effects of these factors depended on the characteristics of a metropolitan area.

RACIAL SEGREGATION IN THE 1980S

Conflicting conclusions have been drawn about the course of segregation during the 1970s. Focusing on the largest metropolises, Massey and Denton (1993:83) observed that "the nation's largest black communities remained as segregated as ever in 1980." However, Jakubs (1986) found that segregation declined in the majority of all 318 metropolitan areas, especially in young metropolitan areas.

To avoid ambiguity, we describe segregation levels at the beginning and end of the 1980-1990 decade using all metropolitan areas with substantial black populations. We find a pervasive pattern of modest declines-the average index of dissimilarity fell from 69 in 1980 to 65 in 1990.1 Segregation decreased in 194 metropolitan areas and in 85 of these areas declined at least 5 points. In 1980, 14 metropolitan areas had indexes exceeding 85, whereas ten years later only four metropolitan areas had indexes that high. In 1980, 29 metropolitan areas could have been classified as moderately segregated if that means a score of less than 55. The number of moderately segregated places more than doubled to 68 in 1990. (For other studies of segregation in 1990, see Denton 1992; Harrison and Weinberg 1992; Massey and Denton 1993:table 8.1; Weinberg and Harrison 1992.)

The top panel of Figure 2 presents the frequency distribution of segregation scores—in-

From all metropolitan areas (MSAs, NECMAs in New England, and PMSAs elsewhere) defined for 1990, we analyzed 232 with 20,000 or more blacks or in which blacks made up at least 3 percent of the population in 1990. Data were obtained from the STF-1A file for the 1990 and 1980 censuses.

Block groups, which were the unit of analysis, averaged 903 residents in 1980 and 564 in 1990. Indexes based on block groups give a more sensitive picture of segregation—and higher scores—than do indexes based on census tracts, which average 5,000 residents. Geographically constant boundaries for metropolises were defined using the counties or parishes employed in the 1990 enumeration.

Data were analyzed for persons who identified themselves as white or black on the race question in the census. About 6 percent of whites and 3 percent of blacks claimed Hispanic heritage on the distinct question about Spanish origin (U.S. Bureau of the Census 1993).

¹ The index of dissimilarity is not influenced by the relative sizes of the black population or white population or the presence of other races (Zoloth 1976). If all block groups in a metropolitan area are exclusively white or exclusively black, the index will equal its maximum value of 100. If individuals were randomly assigned to blocks, the index would approach its minimum of 0. The numerical value indicates the percentage of blacks (or whites) who would have to be shifted from one block group to another to produce an index of 0 (Duncan and Duncan 1955; Jakubs 1979; Massey and Denton 1988; White 1986).

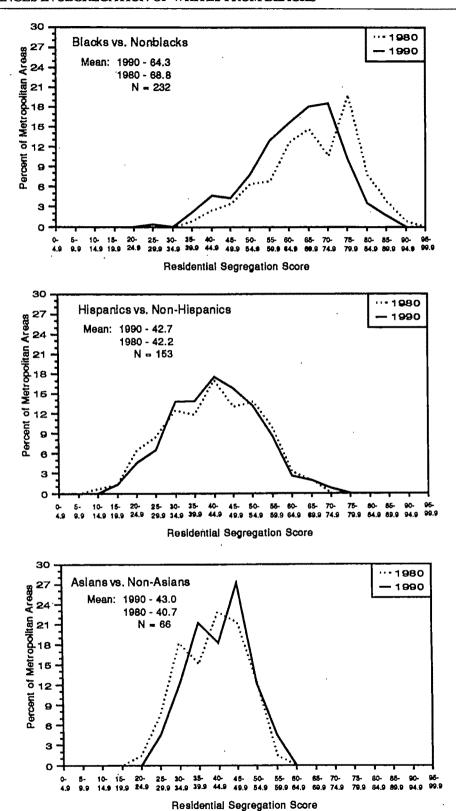


Figure 2. Frequency by Residential Segregation Score: U.S. Metropolitan Areas, 1980-1990

dexes of dissimilarity—for blacks versus nonblacks in 1980 and 1990 for 232 metropolitan areas. Declines during the 1980s were pervasive. Although much inter-metropolitan variation in segregation is evident, segregation of blacks remains much greater than that of the two other major minorities, Hispanics and Asians (second and third panels of Figure 2). The average segregation score in 1990 for blacks (64.3) was 20 points above the average scores for Hispanics or Asians.

Table 1 lists the 15 most and least segregated metropolitan areas in 1980 and 1990. Of the 15 most segregated areas in 1990, 11 are old midwestern industrial centers, and two are retirement communities in Florida. A decade earlier, the most segregated areas included midwestern areas, but also seven retirement centers in Florida. Five of the seven Florida areas disappeared from the list as their populations grew and less segregated housing was built.

The list of least segregated metropolitan areas is dominated by metropolitan areas whose economic bases involved the Armed Forces: Anchorage, AK, Clarksville, TN, Fayetteville, NC, Jacksonville, NC, and Lawton, OK appear in both years, while Cheyenne, WY, Fort Walton Beach, FL, Honolulu, HI, and Killeen, TX are on the 1990 list. The university towns of Lawrence, KS and Charlottesville, VA also have low levels of segregation in 1990 while Columbia, MO is among the least segregated areas a decade earlier. Some large metropolitan areas have low segregation-Honolulu, HI and Tucson, AZ with populations over 500,000, San José, CA with 1.5 million population, and Anaheim, CA with 2.5 million residents appear among the least segregated areas.

Whether blacks and whites live in racially mixed neighborhoods is influenced by ecological, economic, and social factors, e.g., the history of race relations in the area, the rates of both geographic and social mobility of blacks and whites, the age of the housing stock, real

estate marketing practices, the availability of credit, racial attitudes, and the economic status of each race. We test hypotheses about what accounts for differences among metropolitan areas by analyzing those characteristics of metropolitan areas strongly associated with residential segregation.

Age of Metropolitan Area

The age of a city or metropolitan area is positively related to levels of racial and socioeconomic segregation (Frey and Speare 1988; Schnore 1965). As Massey and Denton (1987) observed, "Cities built up before the Second World War have ecological structures that are more conducive to segregation, with densely settled cores and thickly packed working-class neighborhoods..." (p. 818).

Age is measured as the decade in which the largest city in a metropolitan area first reached 50,000 population. For Baltimore, MD, New Orleans, LA, and New York City this occurred decades before the Civil War, while Atlanta, GA, Denver, CO, and Los Angeles, CA satisfied this criterion toward the end of the last century. At the other extreme, Anaheim and Riverside, CA and Ft. Lauderdale, FL reached this status after World War II. Other areas—Daytona Beach, FL and Anchorage, AK—became metropolitan after Congress passed the Fair Housing Act.³

Figure 3 shows that old metropolises are most segregated, and differences by age are substantial. In 1990, the average segregation score is 76 in metropolitan areas whose central cities reached 50,000 before 1890, whereas in the newest metropolitan areas, the average score is 58. The percent decrease in segregation scores is greatest in the youngest metropolitan areas, but declines were certainly not restricted to such places—segregation decreased in old metropolitan areas as well.

Functional Specialization

Metropolises differ in economic bases, which can influence segregation in three ways. First, the types of housing may be directly linked to

² These indexes which compare the residential distribution of one group to that of another group were computed from data for block groups. They were calculated for all metropolitan areas in which the minority group numbered at least 20,000 in 1990 or made up at least 3 percent of the population in 1990. Note that all other indexes of segregation in this paper compare the residential distributions of those defining themselves as white or black by race.

³ Thirty-five metropolitan areas defined in 1990 had central cities that had not reached 50,000; three metropolitan areas—Nassau-Suffolk Counties and Orange County, NY and Monmouth-Ocean, NJ—had no central city.

Table 1. Indexes of Dissimilarity for the 15 Most Segregated and Least Segregated Metropolitan Areas: United States, 1980 and 1990

1980		1990	
Metropolitan Area	Index of Dissimilarity	Metropolitan Area	Index of Dissimilarity
Most Segregated		Most Segregated	
Bradenton, FL	91	Gary, IN	91
Chicago, IL	91	Detroit, MI	89
Gary, IN	90	Chicago, IL	87
Sarasota, FL	90	Cleveland, OH	86
Cleveland, OH	89	Buffalo, NY	84
Detroit, MI	89	Flint, MI	84
Pt. Myers, FL	89	Milwaukee, WI	84
Flint, MI	87	Saginaw, MI	84
Pt. Pierce, FL	87	Newark, NJ	83
West Palm Beach, FL	87	Philadelphia, PA	82
Pt. Lauderdale, FL	86	St. Louis, MO	81
Naples, FL	86	Pt. Myers, FL	81
Saginaw, MI	86	Sarasota, FL	80
Milwaukee, WI	85	Indianapolis, IN	80
St. Louis, MO	85	Cincinnati, OH	80
Average	88 .	Average	84
Least Segregated		Least Segregated	
El Paso, TX	49	Charlottesville, VA	45
Columbia, MO	49	Danville, VA	45
Victoria, TX	49	Killeen, TX	45
Charlottesville, VA	48	San José, CA	45
Clarksville, TN	48	Tucson, AZ	45
Colorado Springs, CO	48	Honolulu, HI	44
San José, CA	48	Anaheim, CA	43
Anaheim, CA	47	Cheyenne, WY	43
Honolulu, HI	46	Ft. Walton Beach, FL	43
Fayetteville, NC	43	Clarksville, TN	42
Lawton, OK	43	Lawrence, KS	41
Anchorage, AL	42	Fayetteville, NC	41
Danville, VA	41	Anchorage, AL	38
Lawrence, KS	38	Lawton, OK	37
Jacksonville, NC	36	Jacksonville, NC	31
Average	45	Average	42

Note: These indexes are based on block group data and pertain to persons reporting white or black as their race.

functional specialization (e.g., university towns or cities around a military post differ from manufacturing centers). Second, the social characteristics and educational attainment of the population reflect a community's economic base. Finally, the impact of open housing legislation may differ among areas because of differences in their population and housing stock.

The 232 metropolises were classified according to the following criteria to determine their functional specialization:

Retirement communities. Percent of population age 65 and over as estimated by the Bureau of the Census in 1985. Six metropolitan areas were deleted from this category because their elderly were not retirees moving in.

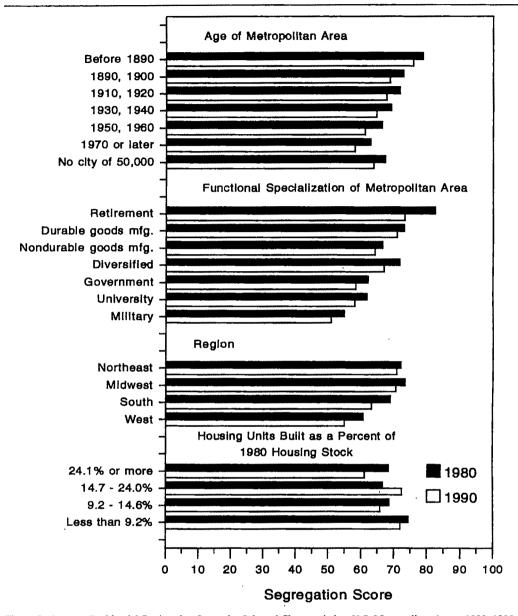


Figure 3. Average Residential Segregation Scores by Selected Characteristics: U.S. Metropolitan Areas, 1980-1990

Durable goods communities. Percent of work force employed in durable goods manufacturing industries in 1980.

Nondurable goods communities. Percent of work force employed in nondurable goods manufacturing industries in 1980.

Government communities. Ratio of employment by local, state, and Federal government in 1988 to total population in 1990.

University communities. Percent of population aged 18 to 24 enrolled in college in 1980. Military communities. Percent of total labor force in the Armed Forces in 1990.

A metropolitan area was classified into one of these functional types if it was one or more standard deviations above the national average for all metropolitan areas on any of these measures. Twenty-three metropolitan areas had two specializations, usually government combined with military or university. Diversified metropolitan areas were not one standard deviation above average on any of the measures. Figure

4

3 presents average segregation scores by functional specialization. Note that some metropolitan areas appear in two categories.

Residential segregation is relatively high in retirement communities. Few retired blacks possess the requisite savings to move into such areas, so the elderly populations in these communities are largely white. Fitzgerald's (1981) study of a Florida retirement community found that residents coming from northern or midwestern cities with histories of racial strife looked forward to living in racially homogeneous areas.

Durable goods communities also have relatively high segregation, on average. Of the 44 durable goods communities, 41 are located in the Midwest or Northeast. Cleveland, OH, Detroit, MI, Flint, MI, Gary, IN, and Saginaw, MI have been among the most segregated metropolises since the need for labor during World War I encouraged blacks to leave the South (Taeuber and Taeuber 1965:table 4). Residential segregation was somewhat lower, on average, in nondurable goods communities. Many nondurable goods communities specialize in textiles, chemicals, or food products, and 16 of the 26 communities are in the South.

The populations of government, university and military communities differ—especially in educational attainment—from those of metropolitan areas that have a manufacturing base. Many residents of university and military communities spend only a few years there, so their attachments to their neighborhoods may be ephemeral. Persons living in dormitories, barracks, or in homes on a military base may have been assigned their places of residence.

Segregation was moderate in government communities. As indicated by segregation scores, neighborhoods in Washington, DC were more mixed on average than those in most large manufacturing communities. Fifteen of the 29 government communities are state capitals. By the mid-1980s, 35 states had fair housing laws similar to Federal laws (Lamb 1992:10). Persons enforcing these laws often live in state capitals, so there may be a heightened awareness of open housing requirements.

Segregation in university communities was similar to that in government communities. University communities in the South, including Athens, GA, Charlottesville, VA, Gainesville, FL, and Lubbock, TX have unusually low scores. In the Midwest, among the least segre-

gated are Ann Arbor, MI, Champaign-Urbana, IL, Columbia, MO, and Lawrence, KS. Because racial attitudes are linked to education, whites living in these communities should be relatively tolerant of black neighbors. Structural factors also play a role. Wineberg's (1983) analysis of Gainesville, FL showed how racial changes at a university can overturn entrenched segregation. The University of Florida attracted black students, many of whom chose to live off-campus in apartments that previously were not available to blacks. The school also recruited black professionals who opted to live in white neighborhoods commensurate with their status and prestige.

Military communities have the lowest levels of segregation. In some communities, blacks are assigned to integrated quarters on base or live in apartment complexes that have demonstrated to the local commander that they do not discriminate. Several large metropolitan areas whose economies depend on the military—Norfolk, VA with 1.4 million people and San Diego, CA with 3.5 million—have relatively low levels of segregation.

Region

Region is used as an ecological variable because of its link to the structure of local governments. In the nineteenth century, northeastern and midwestern states granted town and city officials substantial independent authority. Suburban communities sprang up early in the twentieth century. After World War II, more suburbs were incorporated. They developed their own land use regulations, zoning ordinances, police forces, and public schools. When whites began leaving central cities in the 1950s—a migration hastened by the presence of blacks in the cities (Frey 1979, 1984)—they found suburban communities that either had histories of animosity toward blacks or that had developed strategies indicating that their neighborhoods, parks, and schools were for whites only (Newman 1993:123-24).

At the end of the nineteenth century, state legislatures in the South reorganized local governments because of a fear that black voters would join poor whites in a populist movement. Local authority was often vested in county-wide governments, subject to state control. As a result, most southern cities are not surrounded by numerous suburbs and de-

cisions about zoning or policing are made at a county level. School districts in most southern states coincide with county lines, which encouraged residential integration in those districts under Federal court desegregation orders. Southern whites usually do not have the option of moving to a white suburban community with an exclusively white school system. Southern states also had permissive annexation laws. To raise tax revenue from the trend toward suburbanization, administrators in southern cities annexed fringe areas in the 1950s and 1960s, an option all but impossible in the Northeast or Midwest. Local government in the old cities along the West Coast-Los Angeles, CA, Portland, OR, and San Francisco, CA-resembles that of midwestern cities, whereas newer western cities like Phoenix, AZ and San Bernadino, CA were able to annex outlying areas, a factor linked to their low segregation.

Figure 3 shows average segregation scores of metropolitan areas in 1980 and 1990 by region. In 1980, midwestern metropolitan areas averaged 13 points higher than areas in the least segregated region—the West. Segregation declined, on average, in all regions, but the decline was greater in the South and West where 1980 levels were already lower. The gap between midwestern areas (score of 71 in 1990) and western areas (score of 55 in 1990) increased to an average of 16 points. Only four of the 25 western metropolitan areas—Denver, CO, Los Angeles, CA, Oakland, CA, and Portland, OR—have scores above 65, whereas 48 of 61 midwestern metropolitan areas have such extensive segregation.

New Construction

Construction of new housing affects segregation because discrimination was illegal in homes and apartments built after 1969. Metropolitan areas whose housing stock was constructed recently should be less segregated than areas whose housing stock was built before the Depression or shortly after World War II.

To index this dimension, we calculated housing units built 1980 to 1989 as a percent of the housing stock in 1980. Many metropolitan areas had substantial shares of their housing stock erected during the 1980s. For example, in Orlando, FL, 66 percent of 1990 housing units were erected during the 1980s; in Phoe-

nix, AZ, 54 percent; and, in Atlanta, GA, 48 percent. In many southern and west coast metropolitan areas, the majority of housing units were built after the Fair Housing Law banned discrimination. At the other extreme were stagnant or declining metropolitan areas like Buffalo, NY, Pittsburgh, PA, and New York City where homes and apartments built during the 1980s made up less than 6 percent of the stock found there at the start of the decade.

Figure 3 shows average segregation indexes for metropolitan areas classified by age of their housing stock. Metropolitan areas with relatively many homes and apartments built between 1980 and 1989 were less segregated than those in which new construction was rare. Housing units built during the 1980s exceeded 24 percent of the 1980 units in 58 metropolitan areas, and only six of these areas-all Florida retirement communities—had segregation scores exceeding 75. By contrast, 21 of the 59 metropolitan areas in which new construction accounted for less than 9 percent of the 1980 housing stock had segregation scores above 75, and all but 2 of the 21 are in the Northeast or Midwest

Two additional ecological variables and one indicator of the economic standing of blacks are relevant to explaining differential segregation in 1990. Consistent with previous studies (Massey and Denton 1987:table 7), in 1990 large metropolitan areas were more segregated than small metropolitan areas. Segregation was also relatively low in areas with large Hispanic and Asian populations relative to blacks (Frey and Farley 1993). Areas with relatively many Hispanics and Asians are in regions that were not traditional destinations for blacks, so racial antagonism is less intense than it is in areas with traditional black concentrations. Also, the large Hispanic populations in many of these areas may serve as a "buffer" between residences of whites and blacks, thus lowering segregation (Santiago 1989).

4

Finally, mean black household income as a percent of mean white household income indexes the economic status of blacks. This percent had a modest relationship to segregation scores in both 1980 and 1990—the higher the percent, the lower the segregation score.

The impact of ecological and economic factors on segregation scores in 1990 was determined in a multivariate analysis. The dependent variable is the segregation score for blacks versus whites. The ecological model hypothesizes that historical factors (e.g., region, functional specialization, and age of the metropolitan area) and recent developments (e.g., new construction, nonblacks as a percent of the minority population, and black income relative to white income) influence whether neighborhoods in a metropolitan area are thoroughly or moderately segregated. Table 2 presents the results of the analysis.

Metropolitan areas in the Northeast and Midwest were significantly more segregated in 1990 than those in the South or West, net of the other variables. The net effect of region is probably rooted in the history of local governments, specifically the power of independent suburbs in the Midwest and Northeast.

The functional specialization of a metropolitan area had a strong net effect on segregation. Retirement communities were significantly more segregated—segregation scores, on average, were 12 points higher than those in equivalent metropolitan areas with a diversified economic base. University communities and military communities had significantly lower segregation—segregation scores were about 8 points lower than those of comparable diversified areas—probably because of the unique housing stock in such places, the influence of military commanders on the local housing market, and the more liberal attitudes of residents.

Metropolitan areas with substantial recent construction had low levels of segregation net of other factors. Consider two metropolitan areas that are alike in every respect except that recent construction equals 5 percent of the 1980 housing stock in one and 30 percent in the other (e.g., Buffalo, NY and Charlotte, NC). The metropolitan area with 30 percent new construction had a segregation score 3 points lower than the area with 5 percent new construction, suggesting that neighborhoods built recently were less segregated, perhaps as a result of the Fair Housing Act.

Population size had a significant positive independent effect on segregation—small metropolitan areas were less segregated than large areas. The 232 metropolitan areas had an average population of 400,000 in 1990. A metropolitan area of 400,000 is estimated to have a segregation score 3 points lower than a comparable metropolitan area of 1 million population.

Table 2. OLS Partial Regression Coefficients for Regression of Segregation Scores on Selected Independent Variables; U. S. Metropolitan Areas, 1990

1990			
Independent Variable	Partial Regression Coefficient	Mean	S.D.
Intercept	53.3 (6.8)		
Region ^a			
Northeast	+6.01** (3.6)	.14	.35
Midwest	+6.58** (4.9)	.26	.44
West	+.28 (.1)	.11	.31
Functional Specialization			
Retirement communities	+11.52** (5.8)	.06	.25
Durable goods manufacturing	+1.61 (1.1)	.18	.39
Nondurable goods manufacturing	86 (5)	.09	.28
Government communities	-2.29 (-1.4)	.08	.27
University communities	-7.94** (-4.4)	.06	.25
Military communities	-8.00** (-5.1)	.09	.29
Age of Metropolitan Area			
1900 or earlier	+.72 (.4)	.24	.43
1910 to 1940	+.07 (.1)	.28	.45
1950 to 1960	+.16 (.1)	.17	.38
1970 or later	-2.37 (-1.6)	.15	.35
Housing Units Built 1980-19 as a percent of 1980 stock		19.0	14.4
Population (log), 1990	+3.12** (5.3)	12.9	1.1
Percent of minority pop- ulation nonblack, 1990	12 [♣] (-5.1)	28.5	23.6
Black Household Income as a percent of white house- hold income, 1990	38** (-6.2)	62.3	7.9
Adjusted R ²	.68		
Number of metropolitan area	as 232		

p < .05 ** p < .01 (two-tailed tests)

Note: Figures in parentheses are t-statistics. Because the dependent variable has a truncated range—0 to 100—a logit transformation has been used in similar analyses (Massey and Denton 1987). However, the distribution of the dependent variable is nearly normal (Figure 2) so OLS regression with an untransformed segregation score is appropriate.

^a Omitted categories are "South" for region, "Diversified" for functional specialization, and "No Central City of 50,000" for age of metropolitan area.

A metropolitan area's size, age, and age of housing stock are intertwined—many old areas are large, but have grown little in recent decades. However, age of metropolitan area had no independent effect on segregation scores in 1990. Although old metropolitan areas were more segregated, this relationship reflects the size of these areas and the lack of new housing.

The presence of minorities other than blacks had a net effect of significantly lessening the segregation of blacks from whites, lending support to the "buffering" thesis. Segregation in a metropolitan area in which nonblack minorities made up only 3 percent of the minority population was 5 points higher than that in a comparable area in which they make up 41 percent (e.g., Birmingham, AL versus Dallas, TX).

Analysts have suggested that the growth of the black middle class should foster residential integration (Massey and Denton 1987:817; Taeuber and Taeuber 1965:78–86). Metropolitan areas in which black household income was high relative to white household income had significantly lower segregation scores, net of other variables. In Riverside, CA black household income was 82 percent of white household income; in Memphis, TN this figure was only 50 percent. This difference translates into a 12-point net difference in residential segregation scores, suggesting that improvements in the economic status of blacks may lead to residential assimilation.

EXPLAINING CHANGES IN SEGREGATION IN THE 1980S

Segregation between blacks and whites changed little in Detroit, MI in the 1980s, but fell by 11 percent in Los Angeles, CA and by 20 percent in Fort Worth, TX. What accounts for this variation? An ecological model assumes that long-standing characteristics of a metropolis may either facilitate or impede declines in segregation. The influence of these characteristics is mediated by other changes like new construction, growth of white and minority populations, and shifts in the economic status of blacks.

Changes in segregation during the 1980s are analyzed using the ecological variables described, but we also include two measures of differentials in growth: the average annual growth rate of the black population minus the average annual growth rate of the white population, and the average annual growth rate of "other races" minus the average annual growth rates for blacks.

Factors other than the ecological variables may also explain changes in segregation. Segregation should decline in areas in which the economic status of blacks relative to whites increased. To index this, we calculated mean household income of blacks as a percent of whites' mean household income for 1980 and 1990. Subtracting the 1980 percentage from the 1990 percentage reveals that, despite the emergence of a black economic elite, the average income of black households fell further behind that of whites: In 1980, black household income averaged 65 percent of white household income as compared to 62 percent in 1990. Blacks gained on whites on this measure of prosperity in only 55 of the 232 metropolises.

The success of the open housing movement (e.g., programs that encouraged stable integration in Shaker Heights and Oak Park) probably influenced changes in segregation during the 1980s. Although Saltman (1990) provided information about many successful integration strategies throughout the country, there is no systematic assessment of these programs. Therefore, we cannot rate metropolises with regard to the effectiveness of their open housing efforts.

The discriminatory practices by real estate brokers and lenders are relevant to changes in segregation. A recent HUD audit provided quantitative information for 19 metropolises, but such data are not available for all 232 metropolitan areas (Yinger 1991:table 18)

Data on racial attitudes for all areas could also help explain intermetropolitan changes in segregation. Although such data are not available, we calculated an index tapping the racial attitudes of whites. If whites are reluctant to live in neighborhoods with relatively many blacks, then some metropolitan areas should be easier to integrate than others. Suppose in one metropolitan area whites live in neighborhoods that, on average, are only 2 percent black. In another, whites live in neighborhoods in which, on average, 12 percent of the residents are black. Whites in the former area may be less hostile to a few more blacks moving into their neighborhoods, because neighborhoods will

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Table 3. Partial Regression Coefficients for Regression of Percent Change in Segregation Score on Selected Independent Variables: U. S. Metropolitan Aras, 1980–1990

Independent Variable	Partial Regression Coefficient	Mean	S.D.
Intercept	-12.12 (-2.2)		
Region ^a			
Northeast	+6.1 ^{••} (4.5)	.14	.35
Midwest	+4.3** (3.7)	.26	.44
West	+3.0° (2.2)	.11	.31
Functional Specializationa			
Retirement communities	+3.3** (2.1)	.06	.25
Durable goods manufacturing	11 (1)	.18	.39
Nondurable goods manufacturing	+1.7 (1.3)	.09	.28
Government communities	+2.3 (1.8)	.08	.27
University communities	+1.2 (.9)	.06	.25
Military communities	-3.0** (2.8)	.09	.29
Age of Metropolitan Areaa			
1900 or earlier	-2.1 (-1.5)	.24	.43
1910 to 1940	-1.6 (-1.4)	.28	.44
1950 to 1960	-1.7 (-1.4)	.17	.38
1970 or later	-2.0 (-1.6)	.15	.35
Housing units built 1980-19 as a percent of 1980 stock		19.0	14.4
Population (log), 1980	+.34 (.7)	12.8	1.0
Average annual growth rate black minus white, 1980-1990	, +.05 (.2)	.9	1.3
Average annual growth rate other races minus black, 1980-1990	, –.10 (–.7)	3.1	2.6
Change in black household income as a percent of white household income, 1980-1990	10 (.7)	-3.3	5.4
White exposure to blacks, 1980	+.61** (6.2)	6.1	4.3
Adjusted R ²	.41		
Number of metropolitan are	as 232		

^{*} p < .05 ** p < .01 (two-tailed tests)

Note: Figures in parentheses are t-statistics.

still be overwhelmingly white. In the latter area, resistance of whites may be greater because it may appear that neighborhoods are being overrun by blacks.

Data from the Census of 1980 were used to calculate the exposure of whites to black neighbors (James and Taeuber 1985; Lieberson 1981; Massey and Denton 1987, 1988). In many metropolises, a few whites lived in majority black neighborhoods, while most whites lived in areas housing just a few blacks. We considered whites in each metropolis and determined the average percent of their neighbors who were black. This index assesses the typical white resident's "exposure" to black neighbors at the start of the decade. Whites in the 232 metropolitan areas lived in block groups in which, on average, 6 percent of the population was black. In southern metropolitan areas with high percentages black and moderate levels of segregation, whites had relatively many black neighbors; in Tallahassee, FL whites lived in neighborhoods in which 18 percent of the residents, on average, were black; in Richmond and Norfolk, VA the figure was 13 percent. In northern metropolitan areas, whites were much less "exposed" to black neighbors: In Kansas City, KS and Detroit, MI whites lived in neighborhoods that averaged only 4 percent black; in Chicago, IL and Milwaukee, WI the figure was just 3 per-

Table 3 presents the results of the analysis of changes in segregation scores in the 1980s. We wished to study the rate of change in black-white segregation, so the dependent variable is the percent change in the index of dissimilarity. The average change was a decrease of 5.9 percent. Region, as anticipated, had a strong net positive effect (i.e., the shift toward lower segregation levels was muted in the Northeast and Midwest), reflecting the proliferation of small suburbs with traditions of hostility toward blacks. Litigation against discriminatory practices is also hampered in these regions, because court orders often apply only to a particular suburb.

Net of other factors, only two types of functional specialization were significantly related to the percent change in black-white segregation scores between 1980 and 1990. Segregation declined relatively little in retirement communities, probably a result of the type of housing in these areas and the attitudes of their resi-

^a Omitted categories are "South" for region, "Diversified" for functional specialization, and "No Central City of 50,000" for age of metropolitan area.

dents. Military locations, which had low levels of segregation in 1980, had significantly larger percentage declines.

The age of a metropolitan area had no independent effect on percent change in segregation scores. However, a high percentage of new construction was a powerful force promoting integration. A metropolitan area in which housing built during the 1980s made up only 5 percent of the 1980 housing stock had a percentage decline in segregation 4 points smaller than a comparable area in which new housing was 30 percent of the 1980 housing stock.

Population size was linked to the percent change in segregation—large metropolitan areas experienced the smallest declines, but the net effect was not significant. We hypothesized that the percent decline in segregation would be unusually large for metropolitan areas in which the black population grew rapidly compared to the white population (Massey and Denton 1987:819). Presumably, neighborhoods in such areas would be temporarily integrated as racial transition begins. However, this variable had no significant effect on the percent change in segregation scores.

Having shown in Table 2 that a relatively large "other races" population in 1990 was associated with lower levels of black-white segregation, we expected that places in which the Latino and Asian populations grew rapidly relative to the black population would experience declines in segregation. Although the effect was in the expected direction, it was small and not significant.

The effect of changes in the incomes of black households relative to white households was in the anticipated direction—improvement in the incomes of black households relative to white households was associated with declines in segregation, but the effect was small.

The exposure measure had a substantial net impact on the percent change in segregation scores. The higher the percentage black that whites were exposed to in their neighborhoods in 1980, the greater the persistence of segregation during the decade. Compare an area in which whites lived in block groups that averaged 2 percent black (e.g., Boston, MA) with a comparable metropolitan area in which whites lived in block groups that averaged 12 percent black (e.g., New Orleans, LA). The decline in segregation would be 6 percentage points less in New Orleans than in Boston.

Summary

Explanation of variation among metropolitan areas in the percent change in segregation scores during the 1980s must consider local area conditions as well as three national-level factors. First, the heavy hand of the past maintains segregation in old metropolitan areas, i.e., functional specialization, suburban patterns, and housing stock of these areas discourages integration, especially in the Northeast and Midwest (Hershberg, Burstein, Erickson, Greenberg, and Yancy 1981). Second, a high percentage of new housing is linked to declines in segregation. Presumably, new housing developments are less segregated than the old ethnic ghettos. Also, a high rate of housing construction may encourage residential mobility throughout a metropolitan area. Finally, the racial attitudes of whites may limit integration. As Massey and Gross (1991) observed, reductions in segregation in the 1970s were confined to metropolises in which blacks were so few they could be accommodated in white neighborhoods without threatening whites. In the 1980s, declines in segregation were not limited to areas with relatively small black populations, but the largest decreases in segregation occurred in metropolitan areas in which blacks made up a small percentage of the neighborhood of the typical white.

CONCLUSION

This analysis of the forces affecting the residential segregation of blacks and whites suggests the following characteristics of segregation for the 1990s.

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(1) A gap between attitude and behavior. Racial attitudes have changed—most whites now endorse the principle of equal opportunities for blacks in the housing market. However, the evidence from the Detroit study and our analysis of the percent change in segregation in 232 metropolitan areas suggest that most whites are uncomfortable when numerous blacks enter their neighborhoods. Also, few whites will move into neighborhoods with many black residents. The conservative attitudes of whites and their fear of becoming a minority in a neighborhood limit the desegregation that can occur. Presumably, attitudes toward Latinos and Asians are not so restrictive.

(2) A stronger link between the economic status of blacks and integration. Studies of the residential segregation of European ethnic groups and other racial minorities, including Latinos and Asians, report that economic assimilation was associated with lessened segregation from native-born whites (Lieberson 1963:chap. 5). This association is not true for blacks, because Jim Crow laws applied to all blacks regardless of economic status (Denton and Massey 1988; Farley and Allen 1987:table 5.10; Massey 1979, 1981; Massey and Denton 1987; Taeuber 1965). This situation may have changed. A substantial and rapid growth of the black middle class should lead many members to seek high quality housing. Some metropolitan areas may have enough middle-class blacks that prosperous, largely black suburbs will emerge (Dent 1992; Garreau 1991). In others, middle- and upper-class blacks may choose to live in integrated areas where their status should elicit greater acceptance by white neighbors. With declining employment opportunities in the industrial North, many middleclass blacks will follow new migration paths, leading to black gains in areas in the West and "New South" where segregation is not so entrenched (Frey 1993).

(3) Differences among metropolitan areas in segregation. Institutionalized discrimination that denied blacks equal treatment in the housing market will persist in the old metropolitan areas of the industrial North and some portions of the Old South. However, in developing parts of the West and South, such practices may be less firmly established and many of these areas now have relatively more Hispanics and Asians than blacks. These areas, which initially did not attract black migrants, have low segregation levels and registered the biggest percent decline in segregation during the 1980s.

In an analysis of residential segregation in large metropolitan areas during the 1970s, Massey and Denton (1987) concluded:

If black residential integration has occurred at all, it has not been within metropolitan areas where the vast majority of blacks live, but through movement to small and mid-size cities that presently contain few black residents. Perhaps the growth of black populations in these smaller metropolitan areas will be the means by which residential integration will finally occur in the United States. (p. 823)

Our analysis suggests that this scenario may become reality during the 1990s. The 25 percent of metropolitan areas with the largest decreases in segregation in the 1980–1990 decade had the lowest average percent black, exhibited the highest average annual growth rate for blacks over the 1980s, and the highest average annual growth rate in mean household income of blacks, suggesting that segregation may remain low in these areas. However, the American apartheid system may break down slowly, if at all, in the old, large metropolitan areas.

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INDUSTRIALIZATION AND RACIAL INEQUALITY IN EMPLOYMENT: THE BRAZILIAN EXAMPLE*

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In Brazil, the relationship between industrialization and racial inequality has been central to the discussion of post-Abolition race relations because the country has had high levels of racial inequality along with rapid but uneven industrialization. I examine how racial inequality in occupations varies with levels of industrialization across 74 Brazilian metropolitan areas in 1980. I find that industrialized areas have lower occupational inequality overall and especially in blue-collar occupations; but at higher occupational levels, racial inequality is either greater or is unaffected by industrialization. These results persist despite controls for the percent nonwhite in the population and educational inequality. Thus, this study supports the conventional view that race loses salience to class as industrial development increases, but only for blue-collar occupations; inequality at the white-collar level is unaffected or even increases with industrialization. Increased educational opportunity has effects on inequality similar to those of industrialization. Implications for Brazilian race relations are discussed.

he relationship between industrialization and racial inequality has long been a topic of debate among sociologists. With industrialization comes the profound restructuring of labor market positions and the potential of unprecedented opportunities for subordinate racial groups. A conventional view holds that the greater opportunity and increased competitiveness associated with industrialization reduce racial inequality because employers are forced to reward labor on the basis of universalistic criteria (Turner 1951; Van den Berghe 1967; Fernandes 1965; Souza 1968). Others disagree, arguing that industrialization perpetuates inequality because industrial employers continue to profit from maintaining the traditional racial order (Blumer 1965; Wilson 1978; Hasenbalg 1979). The case of Brazil offers an opportunity to reexamine the debate.

According to students of Brazilian society, changes in race relations have been especially great in the southeastern and southern regions

of Brazil, where "the dynamics of industrialization, rapid urbanization and massive European immigration have profoundly transformed race relations" (Van den Berghe 1967: 70; see also Bastide 1965; Fernandes 1965; Ianni [1970]1987; Hasenbalg 1979). In these regions, according to Van den Berghe (1967), race relations have clearly moved toward a competitive model and away from the paternalistic model extant in other regions, where labor is divided along racial lines and thus racial inequality is high. While analysts acknowledge that racial composition, urbanization, and immigration patterns all influence regional differences, they often point to industrialization as the key factor causing regional variations in race relations and racial inequality (Fernandes 1965; Ianni 1987; Hasenbalg 1979). Such conclusions for Brazil are unwarranted, however, when based only on the limited evidence from a few regions.

I examine how levels of industrialization and other related factors have influenced patterns of racial inequality in occupations across 74 of the 75 largest metropolitan areas in Brazil in 1980. In Brazil, levels of industrialization vary widely, and in recent decades there has been virtually no state intervention in racial affairs, a very low level of race-based collective action, and no racially segmented labor markets. Thus, the lack of such mediating variables

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makes Brazil a particularly good social laboratory for investigating how metropolitan area characteristics like industrialization affect racial inequality. I use a cross-sectional approach, primarily because a suitable historical data series suitable for analyzing the industrial period is not available for Brazil, at least not from government statistics.

BACKGROUND

Industrialization and Racial Inequality

The conventional view. According to the conventional view, industrialization can be expected to undermine traditional social orders in pre-industrial societies, where, after slavery, patriarchal social systems continued to keep blacks and mulattoes in low-level, racially defined positions (Turner 1951; Van den Berghe 1967; Fernandes 1965). Theoretically, the new industrialized economic system dislodges persons from their old social positions and forces new relationships between races; active competition replaces the structured domination of the old paternalistic system (Van den Berghe 1967). Job opportunities expand for all, and heightened competitiveness requires industrial employers to evaluate workers on the basis of productivity rather than ascription. Moreover, sentimentality is replaced by rationality and status, and contractual and impersonal relations replace personal ones (Blumer 1965). This perspective draws largely from Durkheim's ([1893] 1964) belief that modern societies rationally allocate labor on the basis of workers' achieved rather than ascribed characteristics. According to this conventional view, given greater overall universalism, racial inequality in education decreases.

Industrialization has been central to the work on race relations in Brazil, especially during the 1960s when such work focused on the integration of blacks¹ into the newly industrializ-

ing Brazilian economy. Fernandes (1965) claimed that racism was a legacy of slavery, but that capitalism and industrial development would transform Brazil into a modern society based on class identification, which would eventually displace racial ascription. He argued that white hostility and the "social deficiencies" inherited from the dehumanizing system of slavery² had kept Afro-Brazilians from competing with whites; but such effects, he maintained, were beginning to disappear. Other analysts agreed that industrialization would break down racial barriers in the labor market, but thought it would lead to greater interpersonal racism because majority group members would seek to maintain the old racial order in the new labor market (Bastide 1965:18; Van den Berghe 1967).

In addition to transforming social relationships and values, industrialization brings about specific organizational changes that support this conventional view. Industrialization tends to concentrate workers in factories so that hiring, firing, and promotion are more impersonal and often decided by several supervisors. Absentee company owners interested in maximum returns on their capital may be solely concerned with productivity and thus focus only on the human capital that workers bring to their jobs. In an increasingly competitive environment, even the most racist owners are forced to hire the most productive workers available. A high level of capital investment puts similar pressure on owners. Greater industrial specialization and complexity also ensure greater mobility of workers, thus leading to greater opportunity for underrepresented groups. The same phenomenon may obtain in modernized service sectors, which also become increasingly competitive and often ancillary to manufacturing. So goes the conventional view.

pretos and mulattoes collectively, claiming that distinctions like black and brown are typologies that reflect perceptual categories constructed by whites (Fernandes 1979). However, these are common perceptions among Brazilians of all races where preto, the Portuguese translation of black, refers to persons at the darkest end of the color continuum.

¹ Fernandes uses the term "black," although he means both persons with black skin color (in Portuguese, pretos) and mulattoes. The term is a translation of the Portuguese "negro" which often, but not always, includes pretos and mulattoes. I prefer to use the term "nonwhite" in this study to refer to persons identify in the Brazilian Census as preto and pardo (brown skin colored persons, but not exclusively mulatto). The Afro-Brazilian movement prefers the term "negro" in Portuguese to refer to

² Fernandes' argument about the social deficiencies inherited from slavery has been repeatedly questioned (Hasenbalg 1979; Andrews 1991), but this should not detract from his central argument about the effects of industrial development.

Blumer's perspective. This view was challenged by Blumer (1965) and later by Hasenbalg (1979) with regard to industrialization in Brazil. Blumer, while recognizing the great transformative influence of industrialization, proposed that industrialization might actually reinforce the traditional racial order. Where subordinate groups are highly differentiated and marginalized, industrial organizations may find material advantages in maintaining the racial order, such as avoiding labor conflicts where dominant group workers benefit from the elimination of subordinate group members as potential competitors for jobs (Blumer 1965; Hasenbalg 1979). Thus, industrialization would reinforce the prevailing racial ideology, ensuring the continuation of racial inequality: Industrialization's effect would be neutral, although racial group membership may have acquired a new meaning and function. For the Brazilian case, the denial of racism by much of the elite and middle class (Hanchard forthcoming) may reinforce the perception that there is no problem to fix, entrenching the old racial order.

Supporters of Blumer's view have stressed that the role of the state is especially important. Blumer maintained that only social policy could intervene to affect the racial order (Blumer 1990:165).3 From a similar perspective, Wilson (1978) demonstrated that racial norms from pre-industrial times have generally maintained pre-industrial inequalities after industrialization, and the continuation of such inequalities in turn reinforced the norms. He noted that in the United States it has been the state, acting in response to political pressures, that has been powerful enough to change racial norms. Most notably, the U.S. state instituted Jim Crow legislation, and more recently, affirmative action policies (Wilson 1978). Likewise, in countries like the United States and Brazil, the state implements most educational reform and development, independent from industrialization.

A third perspective. I propose another perspective, in addition to the conventional view and Blumer's view: that industrialization may actually increase racial inequality at specific points in the occupational structure. In a country with strong racial biases, increasing competitiveness strengthens those business practices that restrict the entry of subordinate group members into high-status positions. This is especially true in a society like Brazil's, where consumers of all but the most basic products are members of the dominant group, and where the state makes no efforts to rectify discriminatory practices. An official investigation of hiring practices by the state of São Paulo showed that employers resist hiring Afro-Brazilians at white-collar levels (Andrews 1991). The study found that many employers feel that blacks working in highly visible positions harm a company's reputation. Employers want to prevent blacks from supervising white workers and to minimize their own interaction with blacks as well (Andrews 1991). Advertisements often require "good appearance" (boa aparencia), a term commonly understood to exclude nonwhites. (Hasenbalg 1979; Eccles 1991; Andrews 1991). Historical evidence from two São Paulo factories shows that with industrialization and the end of European immigration, racial discrimination may have increased in the white-collar sector as racial segmentation in the blue-collar jobs diminished (Andrews 1991). Thus the effect of industrialization may be mixed: increasing, maintaining, or reducing inequality, depending on the particular occupational sector.

The Brazilian Context

Shortly after World War II, Brazil embarked on an "import-substitution" plan. The objective of this plan was to modernize the economy and increase the economic growth by diminishing dependence on foreign-manufactured goods. Brazil's economy had depended mostly on only a few primary exports such as coffee. Industrial growth was high throughout most of the postwar period, however, and by the early 1970s manufactured goods surpassed coffee as the greater proportion of exports (Evans 1979:66). Economic growth was particularly intense between 1968 and 1974, averaging 13 percent per year (Baer 1979:95), and by 1980 Brazil was the seventh largest economy in the capitalist

³ Perhaps Blumer's view generalized from an indepth knowledge of Brazil. His views are presented in a compilation of materials that he wrote in the early 1960s, mostly while at UNESCO in Brazil (Blumer 1990: ix). At the time, UNESCO was sponsoring the most intensive series of studies of Brazilian race relations to date (e.g., Bastide 1965; Harris 1964; Fernandes 1965; Ianni 1987; Van den Berghe 1967).

world. Industrialization was concentrated in certain areas, however, causing great regional differences (Baer 1979; Haller 1982). Meanwhile, high fertility and rural-urban migration caused rapid population growth, and the capacity of various regions to absorb increasing numbers into the modern job sector varied widely as well (Merrick and Graham 1980). Modern, highly industrialized areas like São Paulo fared far better than those like Fortaleza and Teresina, which had bloated informal economies and almost no industrialization. Since 1981, a year of negative growth, the pace of industrialization slowed dramatically throughout Brazil.

Industrialization expanded opportunities for education, particularly at the university level. Throughout the 1970s, federal and state universities were established in major cities throughout all Brazilian regions (Castro 1985; Durham and Schwartzman 1989). However, the availability of quality higher education was clearly greater in industrialized regions: In 1982, not one of the top 20 universities (measured in terms of overall and per capita faculty publications) was to be found in the less developed northeast region of Brazil (Castro 1985).

Prior to industrialization, the racial order had changed somewhat. By the time Brazil abolished slavery in 1888, most blacks and mulattoes were already free laborers (Degler [1971]1986; Skidmore 1974). Nonwhites filled the majority of manual occupations throughout the country; many nonwhites had also become artisans and entrepreneurs. During slavery, many freed blacks, and especially mulattoes, held high-skilled jobs, including those required in the production of sugar (Schwartz 1992). However, from about the time of Abolition to almost 1930, large numbers of Europeans immigrated to Brazil, under the encouragement of the Brazilian state and subsidized for a time by the state of São Paulo in an explicit effort to whiten the largely nonwhite population. These Europeans would soon flood the labor markets of São Paulo state and, to a lesser extent, the southernmost states, bringing unprecedented racial competition for jobs (Skidmore 1974; Hasenbalg 1979). The immigrants often displaced resident black and mulatto workers, as employers clearly preferred the low-skilled European workers (Van den Berghe 1967; Hasenbalg 1979; Andrews 1991). By the 1920s, when this massive immigration had subsided, the immigrants and their children already dominated many high-status positions. Only then did nonwhites begin filling jobs in the industrializing economy (Andrews 1991).

In Brazil, the state has not implemented racespecific policies since it encouraged European immigration in the early part of this century. The only other exception to the state's involvement with racial issues is a 1951 law, revised in the Constitution of 1989, which makes racial discrimination illegal. Unfortunately, the law has only rarely been used and only against the most blatant acts of racism (Eccles 1991: Andrews 1992). No doubt one reason for the lack of state intervention is the widely held ideology that Brazil is a racial democracy-an ideology that supports the illusion that race does not significantly affect life chances (Skidmore 1974; Hanchard forthcoming). Although a small but growing black consciousness movement questions this ideology, 4 it continues to be the conventional wisdom throughout much of Brazil. The strength of the idea of a racial democracy is supported by comparatively high levels of racial interaction, at least among the poor (Telles 1992; Telles 1993), and by a glorification of the African component of national culture (Hanchard forthcoming). Nevertheless, in a context where Brazilian workers of all races still lack even rudimentary civil rights, nonwhite workers are further discriminated against on the basis of race and without recourse to legal protection (Eccles 1991; Hanchard forthcoming).

DATA AND RACIAL CATEGORIES

Data are from the 1980 Census of Brazil. The units of analysis are 74 Brazilian metropolitan areas with populations greater than 100,000.5

I eliminated one metropolitan area with a population greater than 100,000: Blumenau. Regression analysis identified Blumenau as a statistical outlier; it had exceptionally low levels of inequality, apparently because of its very small (2 percent) nonwhite

⁴ In 1980, the racial democracy idea was still very popular. However, consciousness of the situation of Afro-Brazilians increased greatly with the end of military governments in 1985, and especially in 1988 with national events marking 100 years since Abolition (Andrews 1992; Hanchard forthcoming).

The 74 areas include 26 metropolitan areas with nonwhite numerical majorities and 48 metropolitan areas with white numerical majorities. Details available from the author.

Because data for metropolitan areas are available for only the 10 largest cities (in published form or in public use microdata samples), I contracted the *Instituto Brasileiro de Geografia e Estistica* (IBGE) to create a data set which included additional metropolitan areas (Vetter 1988) from the full sample of persons that responded to the 1980 Census long form (administered to 25 percent of the population).

I analyze racial occupational inequality between the white (brancos) and the occupationally subordinate nonwhite populations of metropolitan areas. I combine blacks (pretos) and browns (pardos) into a single nonwhite category because of a relatively small brownblack income gap (Silva 1985; Lovell 1989) and for reasons of Brazilian racial categorization. Racial categories are based on census respondents' self-identification of skin color from four categories including white, black, brown, and yellow (amarello; Asian); thus in this study racial categories are categories of skin color. Self-identification usually occurs in the presence of a census-taker, reducing the likelihood of deviating from the respondent's phenotype. The brown category includes primarily mixed-race persons with varying mixtures of African, European, and Indian ancestry, but also includes Brazil's small indigenous population. This heterogeneous brown category is often criticized as an oversimplification of Brazilian racial composition, since in Brazil many more categories are often used to identify mixed race persons (Harris 1964; Hutchinson 1957). I exclude the yellow category from this analysis because, along with a small "other" and "undeclared" group, it comprises only up to 5 percent of any metropolitan area's population, and the social status of Asian-Brazilians is much more like that of whites than of browns or blacks.

Although skin color was fundamental to slavery and continues to influence life chances in Brazil, racial categories have never been imposed, at least since the colonial period (Carneiro 1983; Castro and Guimarães 1992). Thus racial categorization has become somewhat flexible. Race is defined above all by skin color (the census question asks "What is your color?" rather than "What is your race?").

population, suggesting either random error due to a small sample or to the peculiarities often found in a population of this size.

There is a social preference for lighter categories. High status, in particular, often allows a person to be categorized lighter than his or her phenotype would indicate. Using a single non-white category is justified as a measure for race because racial identification tends to be more flexible between brown and black than between white and brown—presumably because of a strong resistance to identifying as *black* (Degler 1986; Wood 1991). Also, there may be large regional differences in resistance to black identification, particularly in the Northeast where brown is comprised of more numerous color categories and black is only one category at the end of a continuous color spectrum.⁶

VARIABLES, MEASURES AND MODELS

Racial Inequality in Occupations

Racial occupational inequality may be conceptualized as the net occupational advantage of one group over another along a scale of ranked occupational groups. To measure such inequality, I used the index of net difference (ND) (Lieberson 1975; Fosset 1984). Intuitively, net difference can be interpreted as the probability that individuals from one or the other racial group will be in higher ranked occupational groups when individuals in the two racial groups are randomly paired. I calculated net difference scores for employed males (age 10 and older) in nonfarm occupations: In this study,

$$ND = 100 \left(\sum W_i C N_i - \sum N_i C W_i \right),$$

where W_i and N_i are the proportions of white males and nonwhite males in occupation i, and CW_i and CN_i are the cumulative proportions of white males and nonwhite males in occupations ranked below occupation i. ND's values can range from 100 to -100; 100 means that all white males are in higher status occupations than nonwhite males; -100 means that all nonwhite males are in higher status occupations

⁶ A large number of racial categories occurs, especially among the older and more racially mixed Northeast (Hutchinson 1957; Harris 1964; Degler 1986), evidenced by a strong negative correlation (-.68) across the 74 metropolitan areas between the percent nonwhite and the percent of the nonwhite population identifying as black.

than all white males; and 0 means whites and nonwhites are distributed equally. ND is based on three groups of occupations. From highest to lowest rank, these groups are (1) managerial/professional occupations (employers, managers, and high-level professionals); (2) intermediate occupations (semi-professionals, clerical, sales, skilled manual, and transport workers); and (3) unskilled blue-collar occupations (unskilled manual and personal service workers). Net difference scores were limited to these three clearly hierarchical occupational groups because there is little consensus about ranking intermediate occupations (Semyonov, Hoyt, and Scott 1984a:268).

Alternatively, inequality may stem from the relative rigidity of critical boundaries in the occupational structure, such as those between blue-collar and white-collar occupations or between skilled and unskilled blue collar occupations. To evaluate the extent of these differences, I constructed three additional indexes of inequality based on odds ratios (these are defined later in Table 2). Also, while ND may be the best single index for capturing overall inequality, it may be overly sensitive to local differences in occupational structure. Odds ratios, which are marginal invariant, specifically measure access to occupations independent of the occupational structure (although they are limited because they measure differentiation between only two categories). On the other hand, odds ratios are problematic when the meaning of access varies with the margins of the occupational distribution. For example, if a given occupational category represents the top 5 percent of all jobs in one metropolitan area and the top 20 percent of jobs in another, differential access to that occupation usually does not mean the same thing in each of the two areas; in the former it means access to an elite position, whereas in the latter it means access to a more "average" job. Although odds ratios are considered differentiation measures, they become inequality measures when two categories are ranked categories, as they are in this study. Despite a debate in Demography about the usefulness of a number of inequality and differentiation measures, the debating authors reached a consensus that both the net difference and odds ratio measures are particularly good measures once their limitations are understood (Semyonov, Hoyt, and Scott 1984a, 1984b; Fossett 1984). Finally, levels of inequality based on such inclusive occupational categorizations as these are in this study may understate the real racial inequality in Brazil because of large variations in occupational status within these occupational groups and because non-whites tend to earn less than whites in the same occupation (Oliveira, Porcaro, and Costa 1983; Lovell 1989).

Independent Variables and Models

The independent variables are defined later in Table 2 on page 54. I estimated the extent of industrialization by the percent of the total labor force employed in manufacturing industries. Other independent variables are also included in the regression models because whites and nonwhites vary with respect to other factors that may also influence inequality.

I employed four models in the analysis. The first model regresses net difference scores on industrialization (percent in manufacturing) and two control variables. Because whites and nonwhites in Brazil vary in the extent to which they are natives or migrants, I controlled for the relative odds that whites and nonwhites were natives. This has been shown to be especially important in the Northeast, where white migrants dominate in high-level jobs (Castro and Guimarães 1992); in the Southeast migrants dominate in low level jobs, but there the migrants tend to be racially heterogenous. I employ a dummy variable to assess whether or not a metropolitan area is in the state of São Paulo because that state has some peculiar characteristics (Andrews 1991; Merrick and Graham 1979) and because its metropolitan areas are close together geographically, a situation that might lead to correlated errors.8

⁷ I considered street vendors to be unskilled bluecollar workers rather than salesworkers.

⁸ Two ASR reviewers suggested I use a dummy variable for metropolitan areas in the state of São Paulo. Controls for the color continuum, urbanization, and immigration are absent because adding them to the multivariate model had almost no effect. For the color continuum, I considered including the percent of the nonwhite population that identifies as black, but it yielded no statistically significant results, suggesting that this indicator either does not capture the real extent of the racial continuum across regions or that blacks and browns do

The second model adds a control for the percent of the total population that is nonwhite, which is represented by a square-root transformation to capture its curvilinear effects.9 Because industrialization and racial composition are clearly related at the regional level, it may be the percentage nonwhite that drives the regional differences in racial inequality, rather than industrialization as is generally assumed (Fernandes 1965; Ianni 1987; Hasenbalg 1979). The large number of cases (N = 74) in this study reduces the high correlation that would be obtained across a few regions. (The Appendix presents a full correlation matrix; it shows a correlation of -.532 between percent in manufacturing and percent nonwhite.)

Racial composition is also expected to affect racial occupational inequality, although the direction and the reasons for its effect vary widely. Based on the structure in the United States, researchers have claimed a positive relationship between the proportion of the population that is nonwhite and local levels of racial inequality (Turner 1951; Glenn 1964; Blalock 1967; Frisbie and Neidert 1977; Galle et al. 1988). They reason that as the proportionate size of subordinate groups increase, members of the dominant group perceive subordinates as a greater economic and political threat and thus are more motivated to discriminate against them. ¹⁰ Others, however, expect a

not differ greatly in occupational status. Urbanization was operationalized with three variables (percent migrant, recent growth rate, and logged population size), but these also had no significant effect on inequality. This may be because the hypothesized effects of urbanization on inequality refer to a transition from living in rural areas or towns to cities rather than to varying urbanization rates among large cities. Finally, I used the percent of the population aged 60 and over that was born in Italy, Portugal, Spain, and/or Germany to estimate the effect of European immigration earlier in the century since neither ancestry nor ethnicity data was available. None of these indicators, either separately or aggregately, yielded significant effects.

⁹ A spline function in which the percent nonwhite was modeled separately for majority white and majority nonwhite areas (Greene 1990) provided a slightly better fit of the data, but did not alter the results for industrialization.

Blalock (1967), who is most associated with this position, has characterized Brazil as a society queuing effect in which a negative relationship occurs between subordinate group proportions and discrimination. When subordinate group proportions are large, group members are better able to mobilize economic and political resources (Lieberson 1980; Semyonov et al. 1984a; Tienda and Lii 1987). Also, there will be community support for nonwhite professionals and increased opportunities for entrepreneurship (Lieberson 1980). The greater proportion nonwhite may even lead to a spill-over effect in which nonwhites must fill higher status positions because there are not enough whites to fill them. Such gains would overshadow any population size threats to the dominant group. The fact that metropolitan areas in Brazil are up to 85 percent nonwhite (e.g., Teresina) means that nonwhite spillover may affect even the highest occupational positions. Finally, there may be no relationship between the percentage of the population that is nonwhite and inequality in Brazil, because nonwhite persons there are not commonly perceived as acting as or even constituting a single or unified social group. This factor would undermine the threat hypothesis.

My third model includes variables to control for education. At least one study suggests that occupational inequality in modern Brazilian industry is due to educational differences rather than to job discrimination (Castro and Guimarães 1992), suggesting that if industrialization has affected inequality in Brazil, it has done so via education. I used two odds-ratio measures to assess educational inequality at the fourth and the twelfth grade levels. Mean years of schooling is also included because levels of education are vital to occupational outcomes.

Finally, the fourth model includes both the percent nonwhite and educational variables.

FINDINGS

Occupational Distribution by Race in Brazil

Table 1 shows the average occupational distribution among four major occupational cat-

where nonwhites pose a "pure" economic or fear of competition (and not political) threat to whites (1967:145,169-71). In Brazil, he would expect a positive and nonlinear relationship with an ever decreasing slope between relative minority population and inequality.

Table 1.	Mean Percentages of Employed Males, Age 10 and Older, in Four Occupational Groups, by Skin Color: 74
	Metropolitan Areas in Brazil, 1980

		Skir	n Color	
			Nonwhite	
Occupational Groups	White	Total	Black	Brown
Managerial/Professional Occupations (Employers, managers, high-level professionals)	14.6	3.7	2.0	4.0
Intermediate Occupations				
White-collar (semi-professionals, clerical, sales)	33.5	21.3	16.6	22.2
Blue-collar (skilled manual and transport)	22.4	24.4	23.5	24.6
Unskilled Blue-Collar Occupations (unskilled manual and personal service workers)	29.7	50.6	58.0	49.1
Total	100.2	100.0	100.1	99.9
Number of cases	74	74	74	74
Mean composition of metropolitan areas	61.5ª	37.5*	5.3	32.2

Asians and others averaged 1.0 percent and were not included.

egories of employed males, age 10 and older, by race, in the 74 metropolitan areas of Brazil. The intermediate category described earlier is further broken down into white-collar and skilled blue-collar occupations. Whites (14.6) percent) are about four times more likely than nonwhites (3.7 percent) to hold jobs in the highest occupational group. In the lowest occupational group, the unskilled blue-collar category, nonwhites are twice as likely as whites to hold jobs (29.7 percent of whites and 50.6 percent of nonwhites). Among intermediate occupations, whites (33.5 percent) are better represented in white-collar occupations than nonwhites (21.3 percent). As reported earlier, browns tend to have better jobs than blacks but these differences are slight compared to white/ nonwhite differences. Along with evidence from other studies (Silva 1985; Oliveira, Porcaro, and Castro 1983; Lovell 1989), this finding further justifies using a single nonwhite group for analysis, as I do henceforth in this article.

To help U.S. readers to understand the position of the Afro-Brazilian population in the occupational structure, it may be useful to compare occupational distribution by race in Brazil with its equivalent in the United States. In Brazil, nonwhites are more seriously underrepresented in high level occupations than they are in the United States; however, whites in Brazil are more likely than U.S. whites to share unskilled blue-collar occupations with nonwhites.

According to Farley and Allen (1987:264), white males in the United States were about 80 percent more likely than blacks to be in a managerial/professional category (31.4 percent whites compared to 17.4 percent blacks), while almost half as many whites as blacks were in the lowest category of urban occupational groups (14.5 percent compared to 28.0 percent). However, compared to the United States, the occupational structure in Brazil is clearly smaller at the top and has a much wider base at the bottom. Persons in managerial/professional occupations constitute a more elite group in Brazil than in the United States because of the smaller relative size of the occupational category and because managerial/professional mean incomes are roughly double the incomes for intermediate white-collar occupations. In contrast, in the United States there is no more than a 30 percent difference in income between the comparable occupational groups (Jorge, Izhaki, Oliveira, Porcaro, and Costa 1983; Farley and Allen 1987:272).

Description of Variables

In Table 2, the means and standard deviations for dependent variables in the 74 metropolitan areas are shown in the "total" column. Mean values for net difference scores indicate that when employed white and nonwhite males are randomly paired, whites are 25.6 percent more likely to be in higher status occupational groups

Table 2. Definitions, Means and Standard Deviations of Dependent and Independent Variables for Total, Majority White, and Majority Nonwhite Metropolitan Areas: Brazil, 1980

Variable	Total	Majority White ^a Metropolitan Areas	Majority Nonwhite ^a Metropolitan Areas	
Dependent Variables b				
Occupational net difference	25.6	26.1	24.6	
	(5.1)	(4.6)	(6.0)	
Odds (white:nonwhite) of being in managerial/	5.3	6.2	3.7	
professional occupations	(2.4)	(2.4)	(1.2)	
Odds (white:nonwhite) of being in white-collar occupations	2.9	3.1	2.6	
	(.6)	(.5)	(.6)	
Odds (white:nonwhite) of being in skilled blue-collar occupations among all blue-collar occupations	1.6	1.6	1.5	
	(.2)	(.2)	(.2)	
Independent Variables b				
Percent of total employed labor force in manufacturing	20.6	24.4	13.6	
	(12.1)	(13.3)	(4.4)	
São Paulo state (1 if in São Paulo state;	.3	.4	_	
0 if otherwise)	(.5)	(.5)		
Odds (white:nonwhite) of being a migrant among total population	1.0	.9	1.3	
	(.3)	(.3)	(.2)	
Percent of total population that is nonwhite (not transformed)	37.5	21.5	67.0	
	(24.1)	(10.5)	(10.1)	
Odds (white:nonwhite) of having 4+ years of schooling among total population age 10+	2.0	2.1	2.0	
	(.3)	(.3)	(.4)	
Odds (white:nonwhite) having 12+ years of schooling among total population age 10+	5.9	7.0	3.9	
	(2.5)	(2.4)	(1.1)	
Mean years of schooling for total population age 10+	5.4	5.5	5.3	
	(.4)	(.3)	(.4)	
Number of metropolitan areas	74	48	26	

^a White majorities occurred in "southern" Brazil (roughly Southeast, Central-West and South regions); nonwhite majorities occured in "northern Brazil (roughly North and Northeast regions).

Note: Numbers in parentheses are standard deviations.

than are nonwhites. Odds ratios indicate that racial differences are clearly greater at the top of the occupational structure. Specifically, for whites as compared to nonwhites, the odds of being in managerial/professional jobs are 5.3 times greater with substantial variation (s.d. = 2.4); the odds of being in white collar jobs are 2.9 times greater; and the odds of being in skilled blue-collar jobs among all (skilled and unskilled) blue-collar workers are 1.6 times greater with little variation (s.d. = .2). An average of 20.6 percent of metropolitan area labor forces are employed in manufacturing, but a standard deviation of 12.1 indicates substantial variation. Mean percent nonwhite is presented in untransformed values and is 37.5 percent and varies widely (s.d. = 24.1).

The second and third columns of Table 2 show the means and standard deviations for all variables for majority white and majority non-white areas. Besides allowing a grouping based on racial composition, this division conveniently provides a North-South geographic distinction¹¹ and illustrates Brazil's notorious regional differences in industrialization as well

^b Dependent variables refer to male employed workers, age 10 and older, and independent variables refer to the total (male and female) population, with further criteria as indicated.

All metropolitan areas with white majorities are in the nine southernmost states (among Brazil's officially recognized regions, South and Southeast regions, and one state from the Center-West), while almost all the nonwhite majority areas are in the northern states (Northeast and North and two states from the Center-West). The exceptions are three metropolitan areas in the southern states but which are close geographically to the northern states.

Table 3.	OLS Coefficients for Regressions of Occupational Net Difference Scores on Selected Independent Va	ari-
	bles: 74 Metropolitan Areas in Brazil, 1980	

Independent Variable	Model 1	Model 2	Model 3	Model 4
Percent in manufacturing	135* (.059)	159** (.059)	120** (.027)	115** (.028)
São Paulo state	5.275** (1.670)	5.181** (1.636)	2.592** (.719)	2.536** (.721)
Odds ratio of being a migrant	3.565 (2.702)	6.887* (3.384)	5.841** (1.182)	5.294** (1.308)
Percent nonwhite (square root)	_	76 8* (.384)	generals.	.176 (.181)
Odds ratio of having 4+ years of schooling	_		8.036** (1.011)	7.930** (1.017)
Odds ratio of having 12+ years of schooling		_	.877 ** (.159)	.910** (.163)
Mean years of schooling	_		4.111** (.656)	4.355** (.703)
Intercept	23.174	25.323	-22.580	-24.450
R ²	.163	.209	.862	.864

^{*} p < .05 ** p < .01 (two-tailed tests)

Note: Numbers in parentheses are standard errors.

as in racial composition (Merrick and Graham 1979; Evans 1979). Net difference scores indicate greater inequalities across the full occupational distribution in places where whites are the majority—in the South. For whites, the odds of being in managerial/professional jobs are much greater in majority white metropolitan areas; for nonwhites, in contrast, the odds of being in white-collar jobs and in skilled versus unskilled blue-collar jobs are only slightly better in majority nonwhite areas. In majority white areas, fully 24.4 percent of the labor force is employed in manufacturing, compared to only 13.3 percent in majority nonwhite areas, even though standard deviations indicate that industrialization varies substantially in the majority white area (13.6) and is consistently underdeveloped in the majority nonwhite one (4.4). Nonwhite people average 21.5 percent of the population in majority white areas, and 67.0 percent in majority nonwhite areas. The means of the other independent variables are roughly similar by region, with one exception: The odds that whites will complete 12 or more years of schooling are 7.0 times those of nonwhites in the mostly white South, compared to only 3.9 in the North. This is consistent with the fact that North-South differences in racial inequality are especially great in the highest occupational level.

Explaining Net Difference

Regression results for net differences in occupations between whites and nonwhites are presented in Table 3. Coefficients for industrialization (percent in manufacturing) are negative and statistically significant in all models, supporting the conventional view that increases in industrial development lead to decreases in racial inequality in occupations. However, the coefficients are small; this indicates that the net difference between a highly industrialized area with about 35 percent of its labor force in manufacturing and a poorly industrialized area with about 10 percent employed in manufacturing would be only 3 to 5 points—roughly 12 to 20 percent of the mean net difference thus providing only a small change in inequality across the full occupational distribution. Location in São Paulo state raises net difference by over 5 points, but raises it only by about 2.5 points when education is controlled.

The introduction of percent nonwhite in Models 2 and 4 has no effect on the direction or statistical significance of industrialization, suggesting that the variables have independent effects on inequality. Also, a greater percent nonwhite population reduces inequality, but only in Model 2, the model without educational controls. When educational differences are

controlled, the effect of nonwhite population percentage disappears, suggesting that its effect works primarily via education.

When educational differences are controlled (Models 3 and 4), the industrialization-inequality relationship also remains strong and indeed sharpens, as indicated by the halving of standard errors. Thus industrialization has a direct negative effect on inequality in the labor market. However, controlling for education reduces the magnitude of the coefficient, suggesting that industrialization also increases labor market inequality via formal education. Finally, the improvement in R² with the introduction of the education control variables demonstrates that most of the variation in inequality across metropolitan areas can be attributed to variations in education.

Odds Ratios

Table 4 presents the regression results for white-nonwhite odds ratios for each occupational group. In Model 1, percent in manufacturing is associated with greater inequality at the managerial/professional level but with less inequality at the blue-collar level. Both relationships are statistically significant. A similar tendency is shown for Models 2 to 4, although only the blue-collar coefficients were statistically significant. Despite the lack of statistical significance at the higher levels, however, the magnitude of the coefficients suggests that industrialization may have more than twice as large an effect on inequality at the managerial/ professional as at the blue-collar level, although we cannot be sure that inequality at higher levels is affected. I conclude that industrialization clearly affects access to major occupational groups: The effect seems to be negative at the top and is clearly positive at the bottom. Finally, industrialization has virtually no effect on the racial barriers to white-collar employment.¹²

A separate analysis of a model that included variables representing the percent of the employed labor force in managerial/professional occupations and the percent of blue-collar workers in skilled occupations had virtually no effect (t-values < 1.0) on models predicting the odds ratios of being in the respective occupations. In other words, variations in odds ratios or access to an occupational group cannot be explained by variations in the sizes of the occupational groups. This suggests that the extent of racial discrimination can be more directly attributed to industrialization.

Being a metropolitan area in the state of São Paulo is significant and positively associated with racial inequality at all levels in all but two of the twelve regressions. 13 The exceptions occur at the top of the occupational structure when education is controlled (Models 3 and 4), suggesting that the advantage of whites at high levels in São Paulo is due primarily to unequal access to a university education.14 The decrease in inequality at the managerial/professional level seems to explain the large drop in inequality across the full occupational distribution that also occurred when educational controls were used. As expected, education variables explain most of the differences at the highest two occupational levels, but they are a less important set of predictors at the blue-collar level. Interestingly, the Model 4 regression for skilled blue-collar occupations shows less racial inequality where mean education is greater, suggesting that improvements in overall education extend advantages to nonwhites only at the level in which most nonwhites are employed. Why metropolitan areas in São Paulo state have greater racial inequality than other parts of Brazil is not clear, but the difference may be due to the waning of benefits from the state's relatively early industrialization or to the massive European immigration to the state which affected this state more than any other. Because Afro-Brazilians were systematically excluded from labor market competition there, racial inequality may have been en-

¹² The relationship between industrialization and inequality across all 74 metropolitan areas is supported in separate analyses I completed for the North and South regions (data available from the author). This remarkable consistency by region makes the findings particularly robust.

Omitting São Paulo from the models shown in Tables 3 and 4 generally had no effect on the magnitude or statistical significance of coefficients representing industrialization, except in Model 1 where the coefficient was significant only in predicting odds ratios in skilled blue-collar occupations.

¹⁴ São Paulo's two large state universities, the University of São Paulo and the State University of Campinas, are arguably Brazil's premier institutions. Each has a student body that includes only small numbers of blacks and mulattoes, many of whom are from African countries.

Table 4. OLS Coefficients for Regressions of White: Nonwhite Odds Ratios of Being in Selected Occupational Groups on Selected Independent Variables: 74 Metropolitan Areas in Brazil, 1980

	and a second sec	Model 1			Model 2			Model 3			Model 4	
			Skilled			Skilled			Skilled			Skilled
Independent Variables	Managerial/ White- Professional Collar	White- Collar	Blue- Collar*	Managerial/ White- Professional Collar	White- Collar	Bluc- Collar	Managerial/ White- Professional Collar	White- Collar	Blue- Collar*	Managerial/ White- Professional Collar	White- Collar	Blue- Collar
Percent in manufacturing	.055*	.006 (7007)	006* (.003)	.040	.003 (7007)	008	.026 (710.)	.005 (400)	006* (.002)	.022 (710.)	.005 (904)	008**
São Paulo state	1.506*	.615 - (205)	.174*	.601 ** (.198)	1.450*	.169*	.249 (.456)	.268 - (.097)	.148*	.278 (.458)	.268** (.098)	.156*
Odds ratio of being a migrant	711 (1.160)	.417	021	.935	.813° (361)	.138	1.155 (.740)	.788*. (.160)	014 (.112)	1.474 (.828)	.789*. (.178)	.15 (<u>5</u> 21.)
Percent nonwhite (square root)	1	1	I	111** (.046)	462** (.160)	045* (.018)	I			099 (.114)	000 (.025)	050** (.017)
Odds ratio of having 4+ years of schooling	1	1	1		1	ŧ	1	.764** (.137)	.424**	1	.764** (.139)	.419** (.078)
Odds ratio of having 12+ years of schooling	·	l		I	1	·	-772. (082)	.148**	***	.758** (.084)	.148	į
Mean years of schooling	1	1		i	*****	1	1.169** (.413)	.416** (.089)	086 (.065)	1.037*	.416". (.096)	160° (.066)
Intercept	4.506	2.209	1.687	5.799	2.521	1.811	-1.376	-2.728	1.282	-6.272	-2.725	1.850
\mathbb{R}^2	306	.162	104	381	726	.175	.745	.832	.356	.748	.832	.433
	-											

p < .05 • p < .01 (two-tailed tests)

Note: Numbers in parentheses are standard errors.

^{*}Refers to the odds of being in skilled blue-collar occupations among all (skilled and unskilled) blue-collar occupations.

hanced there relative to other areas (Andrews 1991). 15

Negative and statistically significant coefficients for the square root of the percent nonwhite in Model 2 indicate that inequality is reduced at all occupational levels, but particularly at the white-collar level. Also, the square root transformation, which was a better fit than a linear measure, reveals that the rate of reduction is especially great at low percentage nonwhite and diminishes as the nonwhite percentage increases. These findings are supported only when education is not controlled, which is consistent with findings for net difference scores (Table 3). This suggests that queuing occurs in education—that educational opportunities for nonwhites increase as percent nonwhite increases.16

When education is controlled (Model 4), the positive effects of relatively greater percent nonwhite remain only at the blue-collar level (i.e., the effect of percent nonwhite operates via education). Access to skilled blue-collar occupations is greater for nonwhites in places where more nonwhites live, even when education is controlled. This suggests that as the percentage nonwhite increases, nonwhites move into these jobs from unskilled jobs; but the corresponding decreases in percent white may mean, conversely, that whites are also moving out of skilled blue-collar jobs. This observation

is consistent with the finding of racial inequality across the full occupational distribution being unrelated to percent nonwhite, as findings for net difference scores demonstrate (Model 4 in Table 3).

Finally, metropolitan areas with greater mean years of schooling have greater racial inequality across all occupational groups. However, while the schooling variable is positively related to inequality at high occupational levels, it is negatively related, but to a lesser degree, to racial inequality at the blue-collar level.¹⁷ Thus educational expansion in Brazil seems to provide greater occupational benefits to whites vis-à-vis nonwhites at white-collar levels than it does to nonwhites at the blue-collar level. Also, zero-order coefficients reveal that mean years of schooling is not correlated with percent in manufacturing or the odds ratios of having either a fourth or twelfth grade education, suggesting that educational expansion has an effect on inequality that is independent of local levels of industrialization and educational inequality.

DISCUSSION AND CONCLUSION

Industrialization decreases, maintains, and even increases racial inequality in Brazil, depending on the level of the occupational structure examined. Thus the expectations that industrialization would either decrease (Fernandes 1965; Bastide 1965; Van den Berghe 1967; Souza 1968) or maintain (Blumer 1965; Ianni 1987; Hasenbalg 1979) racial inequality are only partially correct. Previous studies have failed to consider that industrialization, as well as other strucural processes, may affect racial or ethnic inequality in ways that are quite distinct across societies and by class within a society. The relation between industrialization and racial inequality depends largely on the social meanings that are given to race in a particular society and the potential benefits that inequality provides to the dominant group when that society becomes industrialized.

Specifically, the cross-sectional analysis of employed males across 74 Brazilian metropolitan areas demonstrates that industrialization is associated with decreased racial inequality across the full occupational distribution and at

¹⁵ I substituted the immigration variable described earlier for the state of São Paulo variable because of modest correlation (r = .526). Regression results with the substitution showed that places with high European immigration had greater inequality overall and had greater inequality at the two highest levels only when education was not controlled. There was no relationship between education and inequality at these levels when education was controlled, suggesting that immigration may have led to especially large inequalities in education, perhaps at a period soon after immigration. In 1980, inequalities in the labor market were no longer significantly greater in places experiencing greater European immigration, when the effect of educational inequality was held constant.

These findings on education appear to be driven by the large North-South differences in racial composition, but they are not apparent for the limited ranges of racial composition among areas within the North or South. Interestingly, an exception occurs for the North when education is controlled, suggesting that whites may perceive a threat from nonwhite numbers only when nonwhites constitute a majority of the population.

¹⁷ These results are also supported in separate analyses of the North and South regions.

the bottom of the occupational structure. On the other hand, the findings also show that industrialized areas have greater racial inequality at the top of the occupational structure than do less industrialized areas, although the results in this study are not significant on this point. Furthermore, the magnitude of the effects at the top are clearly greater than those at the bottom. The negative relationship between industrialization and inequality across the full occupational distribution is driven by results at the blue-collar level because most jobs in Brazil are blue-collar-these results remain with or without controls for education, suggesting that industrialization has both direct effects on the labor market and indirect effects via the educational system.

Interestingly, educational development, which is unrelated to industrialization, has similar effects on occupational inequality. Greater mean years of schooling disproportionately benefited whites compared to nonwhites, increasing inequality at managerial/ professional and white collar levels, although it slightly decreased inequality in skilled bluecollar occupations. Separate analyses of majority nonwhite (North) and majority white (South) areas lend further support to these findings. Thus the evidence in this study is consistent: Development in Brazil, whether measured by industrialization or educational expansion, or whether analyzed for all of Brazil or separately for the North or the South, has clearly increased racial inequalities in professional and white-collar occupations while decreasing inequality in skilled blue-collar occupations.

Support for the conventional view for blue-collar occupations, that industrialization reduces inequality, may occur because white workers have not systematically opposed the entrance of nonwhites into the industrial working class (Hasenbalg 1979; Andrews 1991). In fact, since 1930, a white-dominated labor movement has often perceived racial unity as key to its survival (Andrews 1991). There have been attempts to divide the labor movement along racial lines, but these attempts have had little success (Maram 1977).

The finding that industrialization reduces inequality only at the bottom of the occupational structure is also consistent with previous findings on residential segregation—that racism in Brazil increases with income (Telles 1992) and that negative racial attitudes are clearly less intense among poor whites when compared to middle class whites throughout Brazil (Ianni 1987: 65). Relatedly, many Brazilian whites seem to accept blacks and browns in even highly skilled blue-collar jobs, whereas they are often discomforted by their presence in whitecollar jobs.

The newer middle class of industrialized areas has a proportionately smaller Afro-Brazilian component than the older middle class of the less industrialized areas. Findings indicate that the negative effect of industrialization on racial inequality at this level cannot be blamed solely on racial inequality in education. Reasons for not employing or promoting nonwhites in higher occupations may have shifted from instances of prejudice by individual employers to depersonalized, institutionalized racism; companies claim that hiring nonwhites at high levels hurt a company's reputation and that white workers do not want nonwhite supervisors (Hasenbalg 1979; Andrews 1991). On the other hand, the personal disdain that employers have for working in close contact with nonwhites continues as a reason for not hiring nonwhites in white-collar jobs, even in highly industrialized areas (Andrews 1991). That the white middle class may feel more uncomfortable than the white working class with the presence of nonwhites is not surprising given the rather extensive inter-racial contact at the lower level and the near absence of an Afro-Brazilian middle class (Telles 1992). The inefficiency of this system of racism may be tolerated in Brazil because of the exceptionally high profit margins of its manufacturing industries (Braga and Rossi 1986).

The strengthening of racial barriers to middle class employment may reshape norms and values regarding the appropriate "place of blacks" (to use a Brazilian-Portuguese term), norms that in themselves tend to reinforce and even increase inequality at certain occupational levels. That Afro-Brazilians are not represented in the middle class is often perceived as normal by Euro-Brazilians. Furthermore, whites often do not perceive these divisions as resulting from racism, largely because of the widelyheld ideology of racial democracy (Degler 1986; Hanchard forthcoming). In turn, Afro-Brazilians may internalize the idea that bluecollar work is "their place" and thus may re-

duce their aspirations and avoid the humiliation of discrimination by not competing for managerial/professional jobs.

Some authors have argued that because industrialization provides greater opportunities for nonwhites in the labor market, racial competitiveness is heightened, and thus so is white racism (Bastide and Van den Berghe 1957; Bastide 1965; Van den Berghe 1967). The evidence from this study partially supports this claim for the labor market, but evidence on increasing racism in interpersonal relations is not supported. While inequality in the labor market may decline with increased industrialization, evidence shows that interpersonal barriers between racial groups, measured by intermarriage and residential segregation, are unaffected by industrialization. (Telles 1992; 1993).

Racial composition and industrialization are highly related across Brazilian regions, but the analysis of many metropolitan areas permits separate analysis of these variables. The effects of nonwhite population percentages are mixed. Spill-over or queuing theory was supported only when the effects of education were not controlled (Lieberson 1980; Semyonov, Hoyt, and Scott 1984a; Tienda and Lii 1987). However, this finding seems to be driven by large differences in racial composition and was not supported when the range of metropolitan areas was limited to majority white or majority nonwhite areas. The strongest percent nonwhite effect is in the mostly nonwhite areas (North), where it seems that an educational spillover operates in which nonwhites encounter less competition from the white minority in higher education. As a result, a significant, though small, black and mulatto middle class is especially likely to exist in these areas (Azevedo 1953; Telles 1992). However, although the expansion of higher education in the 1970s may have led to unprecedented mobility for some nonwhites, higher education has mostly benefited the almost entirely white, middle, and upper-middle classes (Castro 1985; Durham and Schwartzman 1989). Higher education is concentrated in the mostly white regions of Brazil, and in such places the odds of Afro-Brazilians gaining access to it are quite low.

Racial identification in Brazil may be conditioned by region and class. The boundary separating white and nonwhite may vary by region

as whites in places experiencing large scale European immigration are more likely to be of purely European origin than whites in places with little European immigration and centuries of miscegenation. However, because race is socially defined, local constructions of race, at least in terms of the white-nonwhite dichotomy, are more valid than more universal indicators based on color or phenotype. The influence of class on racial identification may be more problematic to this study as upward mobility may have a "whitening" effect. The extent to which this occurs and how it varies by region is not at all clear, as available evidence tends to be based on small and isolated communities (Hutchinson 1957; Harris 1964; Kottack 1967). However, there is no indication that this effect varies with local levels of industrialization, so that variations in the extent to which class affects racial identification is not likely to change the relation of industrialization with inequality.

Although racial inequality in general has decreased with industrialization, it nevertheless remains high throughout Brazil. No amount of economic development is likely to change the situation substantially, and development will sustain or increase inequality at white collar occupational levels. It would seem that only direct state intervention could make any real difference in the racial order. However, the false perception that racism is only a minor problem in Brazil and that any legal recognition of race will actually create a racial problem has led to a persistent avoidance of the race issue. The Brazilian state does nothing to protect its citizens against racism, allowing employers to discriminate at will without fear of legal consequences, leading to the persistence of low status among nonwhites. Brazilian nonracialism and reliance on industrialization to reduce racial inequalities, when such inequalities are acknowledged, has produced little to be optimistic about.

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Variable		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Dependent Variables	-											
(1) Net Difference		1.000		_					_	_	_	
(2) Odds (whites:nonv being managerial/p	•	.504	1.000		_	_	*********	******		_		
(3) Odds (whites:nony being white collar	hites) of	.808	.723	1.000	_		***************************************		_			
Independent Variables												
(4) Odds (whites:nonv being skilled blue- all blue-collar	•	.652	.401	.315	1.000	_				_	_	Moderation
(5) Percent in manufac	turing	205	.474	.230	128	1.000			_	_		
(6) São Paulo State		.167	.483	.376	.188	.511	1.000	******	_	_		
(7) Odds (whites:nonv being a migrant	hites) of	.092	440	166	058	597	659	1.000		_	_	*******
(8) Percent nonwhite	square root)	070	328	540	203	532	484	.675	1.000	_		******
(9) Odds (whites:nonv having 4+ years so	•	.773	.453	.711	.525	037	103	041	.096	1.000		*********
(10) Odds (whites:nony having 12+ years s	•	.465	.839	.731	.335	.546	587 ·	.476	.564	.476	1.000	***********
(11) Mean years of sch	ooling	.572	.293	.451	.077	163	231	.279	.154	.279	.154	1.000

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HOW 4.5 MILLION IRISH IMMIGRANTS BECAME 40 MILLION IRISH AMERICANS: DEMOGRAPHIC AND SUBJECTIVE ASPECTS OF THE ETHNIC COMPOSITION OF WHITE AMERICANS*

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In 1980, for the first time, the U.S. Census contained a subjective question about ethnic identity. Natural increase, intermarriage, and subjective identification contribute to the current size of each ethnic group. Simulations for the British-, Irish-, German-, and Italian-origin populations show the interaction among time of arrival, overall fertility and mortality trends, and differential fertility in determining natural increase. The subjective identification with some ethnic groups, notably the Irish and Germans, exceeds what natural increase would imply, while identification with other ethnic groups falls short of what demographic processes would imply. Loglinear models of ethno-religious intermarriage show that religious diversity is an important factor in the diffusion of Irish and German identities, while the relative religious homogeneity of the British and Italians limits the diffusion of those identities. The subjective component is a residual in this analysis.

White Americans think of themselves as the children of immigrants. Our calculations from the General Social Survey (GSS) (Davis and Smith 1992) show that when white American adults are asked "What country or part of the world did your ancestors come from?" 92 percent can name a specific country or part of the world, and 89.4 percent of those name a European country. The modal responses among the remainder are "American Indian" (which raises questions about the

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"race" item), followed by "Mexico" and "French Canada." The 1980 Census question yielded similar results; only 8 percent of whites failed to mention a European country when asked the subjective ancestry question (Lieberson and Waters 1988; Farley 1991).1

Although nearly all white Americans are descendants of Europeans, very few are actually the children of immigrants; most non-Latino whites are natives with native parents. For most Americans, the family lines to Europe stretch back at least two generations. For groups that started coming to North America before 1800, the number of current descendants far exceeds the total number of immigrants. For example, the 1980 Census enumerated over 40 million Irish Americans — 18 percent of the U.S. population (Lieberson and Waters 1988:table 2.1). Immigration records

¹ Yet recent work has raised serious questions about how deep the roots of nationality are (Lieberson and Waters 1988; Waters 1990; Alba 1990; Farley 1991). The majority of adults from the largest European groups are not only native born, but are the offspring of native-born parents. Intermarriage has increased (Alba 1976; Alba and Chamlin 1983; Waters 1990). Most significantly, some people are not reliable in their reports of their own nativity (Smith 1985; Waters 1987; Farley 1991).

² The ethnic ancestry data from the 1980 Census

indicate that 4.1 million immigrants came from Ireland between 1820 and 1920 (Blessing 1985). Add to that the 400,000 Irish-origin residents already present in 1790 (not all of whom were immigrants) and the 200,000 to 300,000 immigrants from Ireland since 1920 and you have an Irish immigrant base of 4.7 to 4.8 million people. The 40 million people who identified themselves as native-born Irish Americans in the 1980 census constitute an amazing ninefold increase of current stock over the original source of 4.5 million immigrants (not counting the 200,000 Irish-born American residents and naturalized citizens). A similar increase could be shown for other groups that immigrated early, such as the British and the Germans. Even groups that first arrived significantly later, such as the Italians and Poles, could have high ratios of current ethnic population to number of immigrants because their fertility during their first generation in the United States was as high as the fertility of the Irish and British during colonial times (Morgan, Watkins, and Ewbank 1993).

Nearly half of the white Americans who identify a European country name more than one (Farley 1991). For example, of the 40 million Irish Americans enumerated in the 1980 census, about half are of mixed heritage. Of those who name Ireland first in the GSS (which since 1985 has coded as many as three ethnic responses), 51 percent mention a second and some even a third country of origin. Among those who name a country other than Ireland first, Ireland is the most common second

are based on responses to the question, "What is this person's ancestry?" The question was posed for each member of a household, but was directed to the person filling out the form (usually a member of that household). It was followed by a blank line. Under the line, the U.S. Bureau of the Census printed some examples: "(For example: Afro-Amer., English, French, German, Honduran, Hungarian, Irish, Italian, Jamaican, Korean, Lebanese, Mexican, Nigerian, Polish, Ukrainian, Venezuelan, etc.)." Respondents could list any number of ancestries for each household member. The first two entries that referred to a country were coded (religious and racial entries were ignored). For 17 special combinations of three groups, the Census coded three entries. The figure of 40 million we report here comes from Lieberson and Waters (1988:table 2.1). It refers to all coded references to "Irish," including reports that mention Irish and nothing else and Irish and one or two other groups.

choice, and is tied with Germany as a third choice among those choosing three or more countries.

How did 4.5 million Irish immigrants come to be 40 million Irish Americans? The growth of ethnic populations, including the Irish, has three components: natural increase, intermarriage, and preference. We combine a demographic analysis of natural increase with a sociological analysis of intermarriage. Preference is a subjective component; it remains a residual in our analysis.

We focus on Great Britain, Ireland, Germany, and Italy for both practical and substantive reasons. From a practical point of view, data on immigration, fertility, and ethnic identification are available at a country-specific level for all four countries. A similar analysis attempting to analyze Swedish identification. for example, would encounter the difficulty that sometimes Sweden is included in the general category of "Scandinavian." From a substantive point of view, these four ethnic groups constitute four out of five of the most common ethnic identity responses for white Americans. (Actually, French-American was named slightly more often than Italian-American, but the complications of immigration via Canada made the French a difficult group to study.) In addition, the four countries represent a range of the U.S. ethnic experience. The four countries differ in religious heterogeneity: British immigrants were primarily Protestants, Italian immigrants were Catholics, Irish immigrants were both Catholics and Protestants, and German immigrants were a mix of Catholics, Protestants, and Jews. The timing of peak immigration to the United States differs for these four countries as well; the British were the earliest group, followed by the Irish, the Germans, and then the Italians.

NATURAL INCREASE COMPOUNDED BY TIME IN THE UNITED STATES

The simplest demographic analysis of the ethnic identities reported in the 1980 Census compares the number of modern ethnics with the number of immigrants from each country of origin. The two would be equal if there

³ "British" throughout this paper refers to persons who list England, Scotland, or Wales as the country or part of the world their ancestors came from.

were no natural increase (if each immigrant replaced him or herself with exactly one descendent), if there were no intermarriage, and no preferential identification. The number of immigrants recorded since 1820 is small, and the numbers for all four groups are surprisingly similar: 5 million British, 4.5 million Irish, 7 million Germans, and 5.5 million Italians (U.S. Bureau of the Census 1975, 1991). Comparing these figures with the 61 million British, 40 million Irish, 49 million Germans, and 12 million Italians reported in the 1980 census we find very little accord. For example, more Italians have immigrated to the United States than both the British and the Irish, and vet those claiming Italian ancestry in 1980 number less than one-third of those claiming British or Irish ancestry.

It is easy to see why the total number of immigrants is a poor measure of current population size. First, even under our assumptions of no intermarriage, the cumulative sum of immigrants omits any information about the population resident in the United States before immigration statistics were kept. Second, a raw total does not allow for changes due to natural increase. And third, the total ignores differences in immigration timing. Like the value of a dollar saved, the current number of descendants of an immigrant in a growing population depends on the time elapsed since he or she was, figuratively, deposited in the bank.

Data Sources and Assumptions

A simple model incorporating these three factors takes into account the composition of the population present in the United States in 1820, time-specific rates of natural increase, and the timing of immigration by the different ethnic groups. Populations can be projected recursively from one year to the next using the following equation:

$$K_{t+1} = K_t \exp(r_t) + I_t , \qquad (1)$$

where K_t is the ethnic population size at time t, r_t is the intrinsic rate of natural increase at time t, and I_t is the number of immigrants at time t. Each ethnic group is projected separately.

Initial population size. The initial population size of each ethnic group in 1820, the beginning of our projection period, is based on ethnic surname analysis of the 1790 population

(U.S. Bureau of the Census 1975). Applying the ethnic proportions of the 1790 to the 1820 Census count of the U.S. population, we assume no major changes occurred in the relative sizes of the different ethnic groups between these two dates.

Immigration. Complete time series of immigration by source and year are available starting from 1820 (U.S. Bureau of the Census 1975, 1991).4 The definition of "immigrant" used by the compilers of U.S. immigration statistics is inconsistent. During most of the period from 1820 to 1980, including the years of peak immigration, the total number of immigrants equals the total number of alien passenger arrivals, excluding short-term visitors. No account is taken of return migration or of those resident aliens returning from travel abroad. Fortunately for our purposes these two effects are of similar magnitude, ranging from 10 to 20 percent of arrivals, and cancel each other out for the groups for which estimates have been made (Kamphoefner 1991:300).5

Intrinsic growth rates. We use estimated average white fertility rates (Coale and Zelnick 1963; Heuser 1974; U.S. Bureau of the Census 1991) and female life tables (Coale and Zelnick 1963:tables 11 and 20; National Center for Health Statistics [NCHS] 1983:table 6) to calculate intrinsic rates of natural increase (the crude growth rate of a population in its stable age structure) for the period 1820 to 1980. We use the standard approximation of the net reproduction rate:

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⁴ Annual immigration figures are considered incomplete for *land* arrivals prior to 1904, but this should not have major effects on the figures for Italians, British, Irish, and Germans who arrived by sea. A similar analysis of French-Americans, however, would be difficult because of immigration by land from Canada.

⁵ Return migration as a proportion of immigration from 1908 to 1924 is estimated to have been 13.7 percent for Germans, 8.9 percent for Irish, and 19.3 percent for British. The proportion of arriving immigrants from 1899 to 1910, who had lived previously in the United States is estimated to be 11.5 percent for Germans, 18.3 percent for Irish, and 25.4 percent for British (Kamphoefner 1991). It is difficult to evaluate the impacts of these measures as they cover different time periods. The proportion itself confounds contemporary immigration with the return immigration of those who had arrived at an earlier time.

$$NRR_t \approx TFR_t \lambda_{\mu\nu} p_f,$$
 (2)

where NRR_t is the net reproduction rate at time t, TFR_t is the average total fertility rate of white women at time t, $\lambda_{\mu\nu}$ is the probability that a woman born at time t survives to the mean age of childbearing, and p_f is the proportion of births that are female, set equal to .49 for the entire time period. We assume that the mean age of childbearing is 27.5 years throughout the projection, an assumption that seems reasonable given historical mean ages of child bearing in twentieth-century America and nineteenth-century Europe (Keyfitz and Flieger 1968). The probability of survival to this mean age of childbearing, however, is allowed to vary with time.

The NRR, a generational measure, must be converted to an annual measure. We use the first order approximation,

$$r_t \approx \ln(NRR_t)/\mu$$
 (3)

where μ represents the mean generation length, set constant at 27.5 (the assumed mean age of childbearing).

The projection model in equations 1 through 3 uses stable population assumptions that are clearly violated in U.S. demographic experience. Neither fertility nor mortality in the United States have been constant. Populations have not maintained a stable age structure. However, simple models of stable population growth do provide appropriate relative weights for immigrants arriving at different time periods. If we think of "reweighting" each immigrant in terms of his or her present value, then equation 1 gives an excellent approximation by taking into account not only the timing of the immigrant's arrival, but also the cumulative effect of subsequent fertility trends.

Despite its suitability as a weighting function, equation 1 seriously underestimates the size of contemporary populations. Applying the technique to the stream of all European immigrants (U.S. Bureau of the Census 1975) projects only 130 million European descendants in 1980, whereas the white population counted in 1980 was 196 million — roughly a third larger than the projection. There are two main reasons for this shortfall. The intrinsic rate of increase does not include decreases in old-age mortality — it factors in changes in the probability of surviving up to the mean age of

childbearing, but not changes in mortality beyond age μ . Nor does the model account for the fact that the average female immigrant has children quite soon after arriving - she does not wait the average 27.5 years needed for a newborn baby girl to reproduce herself.6 A third problem with the model is that it does not account for the dramatic waves in the age structure resulting from the baby boom. Because there was a negative intrinsic rate of natural increase since 1965 our projected populations decline after 1970. In reality, age structure counterbalanced this decline, and there was a continuous increase in the number of births per year during this time (U.S. Bureau of the Census 1991).

It seems reasonable to expect that both increased life expectancy and a high average age of immigration should cause the projection to underestimate the number of descendants alive in 1980 by some factor proportional to the total size of the projected population. Because of this, we scale fertility rates, TFR, upwards by a fixed constant for all time periods before applying equation 2. This has the effect of increasing the size of each ethnic group proportionally, while still preserving the effects stemming from differences in timing of arrival. When applying equation 1 to the stream of all European immigrants we use a constant that produces a population equal in size to the 1980 white population. We use the scaled rate of

⁶ Applying the stationary population identity, that population size equals the product of the number of births in a year and life expectancy at birth, we can get an upper bound for this effect. The increase in life expectancy at birth from 50 in 1900 to 70 in 1970 (U.S. Bureau of the Census 1975:55), would account for a 40 percent increase in population size. The actual effect should be considerably smaller, since equation 1 already accounts for decreases in mortality at ages less than 27.5. The magnitude of the effect of the age of immigrants could also be estimated, because arrival of an immigrant at age 20 would mean that he or she would have children 20 years earlier than a newborn baby girl, "arriving" in the same year. This would add about 20 years of "compound interest."

⁷This constant was 1.112, a number substantially smaller than the ratio of the enumerated white population to our projected European root population (196/130 = 1.508). The adjustment factor is smaller than the ratio of enumerated to projected populations because fertility rates during the peak arrival times were much higher than more recent times.

Table 1. Observed and Projected 1980 Population Sizes (in Millions) for Four European Ethnic Groups and the Total European-Origin Population by Projection Type: United States, 1980, 1990

Variable/			Ethnic Group		
Scaling Condition	British	Irish	German	Italian	. White/Europear
OBSERVED POPULATION	N SIZE				
1980 Census	61.3	40.2	49.2	12.2	194.7
1990 Census	40.1	38.7	58.0	14.7	208.7
PROJECTED POPULATIO	N SIZE FOR 198	30			
Unadjusted					
No TFR differentials	50.0	22.9	23.0	8.3	130.2
Low differentials	42.1	16.8	24.9	11.4	_
Medium differentials	37.4	13.8	26.2	11.9	_
High differentials	33.0	11.0	27.8	17.5	_
Adjusted by Scaling Weight					
No TFR differentials	82.5	36.0	34.3	10.2	196.1
Low differentials	69.2	26.3	37.2	14.1	_
Medium differentials	61.3	21.5	39.2	14.7	_
High differentials	54.0	17.1	41.7	21.7	_

natural increase to produce the results we present in the body of this paper. Both scaled and unscaled results are given in Table 1.

Initial Projection Using Average White Fertility

Annual compounding of each population based on intrinsic rates of natural increase and yearly immigration yields plausible results. Whereas the 1980 Census counted 61 million British, 40 million Irish, 49 million Germans, and 12 million Italians, our projection produced 82.5 million British, 36 million Irish, 34 million Germans, and 10 million Italians. The British comprise the largest group in both the projection and the Census, while the Italians comprise the smallest group: This indicates that this simple model has captured at least the most important demographic effects.

However, it appears that there were more self-identified Irish and Germans and many fewer British than we would expect if growth rates varied over time but not among groups at any given time. Does this mean that a British ethnicity is somehow less salient to those of British ancestry than an Irish or German ethnicity is to those of Irish and German ancestry? Before we can answer this question, we must determine if it is reasonable to project all populations with the same rates of growth.

Incorporating Differential Fertility by Ethnicity

Perhaps the projection yields more British and fewer Italians than are counted in the Census because the average white fertility rates we use (equation 1) are higher than British fertility rates and lower than Italian fertility rates. To correct this obvious defect, we incorporate differential fertility by ethnicity into equation 1, producing a projection that is identical in form to our projections using average white fertility except for the addition of ethnicity-specific growth rates.

As no available time-series show the trends in ethnicity-specific differential fertility, we model differential fertility based on cross-sectional differences at the turn of the century (Morgan et al. 1993). We assume that the pro-

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portional differences in fertility follow a linear pattern that peaks around the turn of the century, the period for which were most confident in the weightings. National data on nineteenthcentury fertility by ethnicity are not available. The regional data are limited to too few interethnic comparisons for our purposes. Accordingly, we apply three possible scenarios for the emergence of differential fertility in the nineteenth century and its virtual disappearance in the twentieth century (Westoff and Ryder 1977). "Low differential fertility" begins in 1890 and ends in 1930, "medium differential fertility" begins in 1860 and ends in 1930, and "high differential fertility" begins in 1860 and ends in 1960. The "medium" scenario, beginning in 1860 and ending in 1930, seems to us the most reasonable scenario, since the earlier date marks the appearance of parity-specific control (Sanderson 1979), and the later date marks the beginning of cyclical fertility patterns (Ryder 1973; also see Morgan et al. 1993).

The weighting system converts the average *TFR* of white women at a particular date to the *TFR* of women from a particular ethnic group at that same date using the following equation:

$$TFR_{tt} = TFR_t w_{tt} , \qquad (4)$$

where TFR_t is the average TFR of white women at time t, TFR_{it} is the estimated TFR of ethnic group i at time t, and w_{it} is the proportional deviation of the fertility of ethnic group i at time t.

The weight in 1910 equals the ratio of ethnic group i's TFR to the average TFR in 1910 (Morgan et al. 1993:table 1). The ratios equal 1 before the onset of fertility differentials and return to 1 after the end of fertility differentials (the times of "onset" and "end" define the low, medium, and high projection conditions). Estimates of the ratios between the onset of differential fertility and 1910 are obtained using linear interpolations between 1 and the ratio observed in 1910; estimates of the ratios between 1910 and the end of differential fertility are obtained using linear interpolations between the ratio observed in 1910 and 1. Figure 1 illustrates the weighting ratios used and the resulting differential fertility rates under the medium condition.

Analysis of the 1910 Census Public Use Micro Sample reveals that Italians and Ger-

mans had higher fertility than the average U.S. white woman, while British and Irish had lower levels of fertility (Morgan et al. 1993). It is not surprising then that the surplus of British and deficit of Italians disappears when fertility differentials are taken into account. Table 1 summarizes the results of the projections of this study, giving the projected size of each ethnic group in 1980 according to the different projection specifications. The medium projection corresponds remarkably well with the 1980 Census results; the projected size of the British population, 61 million, and the Italian population, 15 million, are both very close to the Census results. This may in part be an artifact of the scaling factor, which the British, being the largest group, play a larger role in setting. More important than the good fit for the British and Italians, however, is the large underestimation of Irish and German populations. Of the 40 million persons claiming Irish ancestry in 1980 the projection accounts for only 22 million, and of the 49 million persons claiming German ancestry in 1980 the projection accounts for only 40 million.

Conclusions Regarding Natural Increase

Our demographic analysis shows that length of time in the United States and former rates of high fertility account for a substantial portion of the difference between the current size of self-identified European-origin populations and the numbers of immigrants from those countries. Significant differences remain — the differences reflect both intermarriage and ethnic identity preferences.

A stable population projection of numbers of descendants from immigrant populations is equivalent to estimating the size of modern ethnic populations in the absence of intermarriage between ethnic groups. A second way to think about our projection is as a more subtle, but perhaps more realistic, form of a null hypothesis that intermarriage has no effect on final ethnic population size. Intermarriage may occur, but the children of an intermarriage have equal probabilities of identifying with either ethnicity. For example, according to this null hypothesis, out of 1,000 marriages of Irish and Italian spouses, on average one-half of the offspring would consider themselves Irish and one-half would consider themselves Italian.

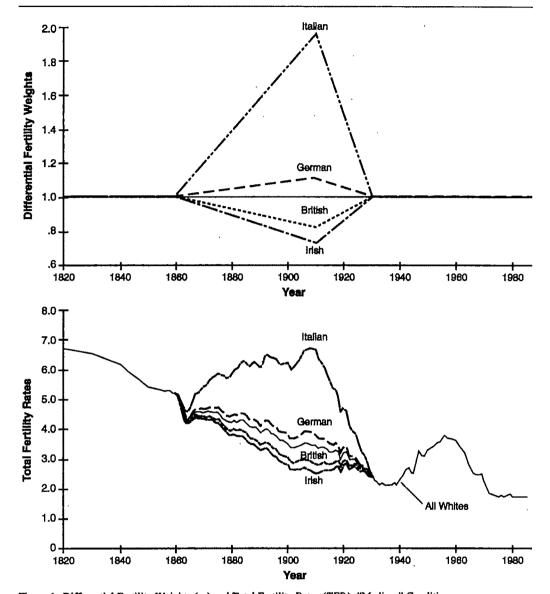


Figure 1. Differential Fertility Weights (w_i) and Total Fertility Rates (TFR_i): "Medium" Condition

Note: TFRs for each group were obtained by applying the differential fertility weights to the TFR for all whites.

The significance of intermarriage levels (analyzed later in this paper) is then two-fold. First, intermarriage creates the opportunity for preferential identification, the process whereby one or several ethnic origins are selectively forgotten and others are selectively remembered. Second, intermarriage creates the possibility of multiple responses to questions about ethnicity, that one is, say, both Italian and Irish. Multiple responses are important: As noted earlier, nearly half of the whites who claim a national origin name more than one country.

INTERMARRIAGE: ETHNICITY AND RELIGION

Intermarriage and its complement, homogamy, are generally assumed to be critical factors in whether national origin groups grow or decline. Generations of "pure" Irish, Italians, Poles, and so on, have admonished their children to marry within the group to preserve it. However, recent findings by Alba (1990) and Waters (1990) imply that intermarriage hurts some groups but helps others, at least in the

numerical sense. In the world of ethnic options, intermarriage provides an opportunity to exercise one's options. For some ethnic groups, intermarriage thins out the ethnic heritage because few offspring of mixed marriages remember ancestors from that group. For other groups, intermarriage is a recruitment opportunity because the offspring of mixed marriages often think of themselves as part of that group, simplifying their mixed heritage with a single mention or expressing the sense that they "feel closer" to one group than to the other.

Formally, we could show that if all groups have the same intermarriage rates and if the patterns of intermarriage between each pair of groups is symmetrical, then intermarriage will have no effect on the size of the population identifying with a group. However, there would be no point in such a formal exercise because neither premise is true. Intermarriage differs significantly among ethnic groups (Alba 1976; Lieberson and Waters 1988). The groups that started coming to North America first now have higher rates of intermarriage than groups that have come in large numbers more recently have had. This has led some observers of ethnicity to include intermarriage as a condition of assimilation (Gordon 1964). Geographically dispersed groups are also more likely to intermarry than are isolated or concentrated groups (Peach 1974; Lieberson and Waters 1988).

Religious creed is a critical component of ethnic identification and, necessarily, intermarriage. The association between husbands' and wives' religions before marriage is probably stronger than the association between their ethnicities (Johnson 1979). Sociologists' concern with the religious component of ethnic intermarriage originates with Kennedy's (1944, 1952) concept of "the triple melting pot" that Protestants, Catholics, and Jews each have their own melting pot and that strong social and doctrinal barriers prevent the assimilation of these three major religious groups (also see Herberg 1960). Kennedy observed a decline in religious inmarriage in New Haven, Connecticut, between 1870 and 1940, but she found that most women who married across ethnic lines married men of their own religion.

Understanding the triple melting pot is important to the hypothesis that intermarriage is the source of Irish and Germans growth be-

cause Irish and Germans can be found in more than one of the three melting pots. Unlike nearly all other groups, the Irish and Germans are religiously divided. Only the French and the Czechs are more evenly split between Protestant and Catholic than are the Irish (Lieberson and Waters 1988:table 7.9); the Germans are distributed throughout all three melting pots because of their mix of Protestants, Catholics, and Jews. This religious mix gives the Irish and Germans access to partners in two or three of the melting pots, while homogeneous groups will have a tendency to marry in only one of the three pots. Contacts with more than one melting pot enhance the prospects for group growth as long as successive generations remember their link to Ireland or Germany.

Peach (1980) reopened the triple melting pot issue with questions about the role of residential segregation in New Haven. He pointed out that the Irish were remote from other Catholic groups, especially Polish, Italian, and other southern, central, and eastern Europeans, and in closer proximity to Protestant groups like the Scandinavians and English. He argued that this segregation pattern is inconsistent with the existence of a Catholic melting pot. Lieberson and Waters (1988) discussed Peach's critique of Kennedy. They concluded that Peach's argument implies that researchers must include residence in their analyses, but not that religion is insignificant. They showed that Catholic selection is negative for predominantly non-Catholic groups, near zero for the mixed groups, and positive for the predominantly Catholic groups. This paper replicates Lieberson and Waters's finding with a data set that measures spouses' religious origins directly.

Lieberson and Waters (1988) revised Peach's (1980) point into an argument that residential segregation contributes to the propensity of people to marry within their own ethnic group. "If the ethnic groups continue to maintain their distinctive current patterns of residential concentration in the United States, we can expect differential levels of intermarriage between various ethnic combinations in the nation — with certain combinations being far more common and others less so — even if the groups would be fully indifferent to the ethnic origins of their prospective mates" (Lieberson and Waters 1988:236). It is important to point out

that Peach was concerned with residential segregation in a local context while Lieberson and Waters address the regional concentration of ethnic populations.8

Intermarriage Data

We use the GSS (Davis and Smith 1992) for 1985 through 1990 to analyze intermarriage. "Each survey is an independently drawn sample of English-speaking persons 18 years of age and over, living in noninstitutional arrangements within the United States" (Davis and Smith 1992:vii). The GSS from 1985 through 1990 contain data on 4,020 currently married whites (out of an initial sample of 9,213 persons) with data on their own religion and ethnicity and the religion and ethnicity of their spouses. Since 1972, the GSS has included questions on respondents' ethnicities (Davis and Smith 1992), but no data on spouses' ethnicities were included until 1985. This is the source of most of what is known about ethno-religious stratification and differentiation in the contemporary United States (Johnson 1979; Greeley 1981, 1989; Roof and McKinney 1987). Beginning in 1985, the GSS has also included a question on spouse's ethnicity (for married respondents). The 1985 to 1990 series on respondent's and spouse's ethnicity is the source for this paper. The ethnicity questions are:

For Respondent: From what countries or parts of the world did your ancestors come?

> [INTERVIEWER: If single country is named, refer to national codes below, and enter code number in boxes.

> If more than one country is named, refer to national codes below, code up to three responses and then ask:]

> Which of these countries do you feel closer to?

> [If one country is named, refer to the codes below, and enter code in the boxes. If R cannot decide on one country, enter code 88.1

For Spouse:

From what countries or parts of the world did your (husband's/ wife's) ancestors come?

[Identical probes and coding.]

-4

Forty countries of origin are identified in the GSS, including "America" (see Lieberson

Solving the problem of how broad a view to take of ethnic residential clustering is beyond the scope of this paper. For present purposes the relative effects of religion and residence are far less important than assessing the absolute effect of religion per se. With that in mind it is important to find an adequate control for residential segregation without necessarily advancing knowledge on the subject. Lacking data on individuals' mobility (other than a crude indicator of whether or not the respondent but not the spouse lives in the same city and state as when she or he was growing up) but suspecting that the probability of a contact resulting in marriage declines as distance from the subject's adolescent home increases (according to some function that drops off rapidly then levels to an asymptote, e.g., 1/d where d is the distance between the subject's adolescent home and the point in question), we have adopted Lieberson and Waters's (1988) approach to examining patterns of regional clustering.

⁸ The data available for this study were fully adequate to assess the effect of religion on intermarriage. Assessing the effect of residence is complicated by our need to choose a level of aggregation in measuring segregation. As mentioned above, Peach (1981) analyzed neighborhood segregation while Lieberson and Waters (1988) showed the effects of regional concentration. Our study also uses regional concentration measures to analyze national intermarriage patterns. Generally, sociologists and demographers follow the principle of minimal aggregation when working with individual level data, but we are not sure that minimal aggregation is best in this instance. It certainly would be if marriage partners were always drawn from the same neighborhood. It might even be the best idea if marriages were localized in some other way (e.g., at the school district level). However, while a significant fraction of Americans find marriage partners next door, on the next block, and in high school, millions of others travel great distances and meet their eventual mates in new surroundings at college, in the army, on the job, or maybe even on a cruise ship (if the ads are to be believed). Studies of local communities would not be well suited to analyzing this "extended" marriage pattern. Any study that relied on such a close look would be well-defined for the individuals who married within the locale, but misleading for those who cast a broader net. The problem is that one group is not representative of the other.

1985). A 41st category (labeled "none") is included for respondents who named no countries. In Smith's (1985) terms this is a subjective operationalization of nationality that maximizes response rates at the cost of eliciting a response from people who are distant from their origins and to whom ethnicity or nationality is unimportant (Waters 1990). Subjectivity is especially important in studies of intermarriage because it invites the respondent to exaggerate homogamy. Our suspicion is that some respondents with complicated or unknown backgrounds emphasized those elements of nativity that they share (or imagine they share) with their spouses. Of course, there might be others who emphasized differences between themselves and their spouses. With the data at hand we do not know which tendency (if either) predominates.

Since 1985 the GSS has coded up to three nationalities for each individual and their spouse. We originally had separate categories for single and multiple mentions of the most common nationalities (British, German, and Irish), but the resulting tables were too sparse to yield reliable statistical analysis.

The GSS does not include a question on the spouse's race, so we cannot combine interracial and interethnic marriage. The patterns for nonwhites would undoubtedly differ from those of whites, so only whites are included. Analyzing only whites obviates the need to use the GSS weights because the only function of the weights is to adjust for the oversampling of African Americans in 1987. The nature of the question limits the analysis to currently married persons who live with their spouse.

The advantage of using the GSS rather than the much larger 1980 and 1990 Censuses to analyze ethnic intermarriage is that the GSS includes data on religion. We use the data on religious origins instead of current religion because many people switch religions to make a mixed marriage homogeneous (Greeley 1989:60–61). To analyze current religion would overstate religious homogamy (Johnson 1979: chap. 1). The religious origin questions are:

For Respondent: In what religion were you raised?

For Spouse: In what religion was your (husband/wife) raised?

Five religious categories are identified: Protestant, Catholic, Jewish, other religion, and no religion.

We can imagine an analysis of the $41 \times 41 \times$ 5×5 table resulting from cross-classifying the fully detailed versions of the GSS ethnicity and religion items for respondents and spouses. That table would have 42,025 cells - far too much detail for the 4,020 respondent-spouse couples combined in the 1985 to 1990 GSS sample. Therefore, we analyze a $9 \times 9 \times 2 \times 2$ cross-classification resulting from collapsing some ethnic and religious categories. For husband's and wife's ethnicity we want as many "pure" categories as we could muster, so we let the five largest groups -German, British, Irish, Polish, and Italian stand alone, combine the three Latino groups into one "Hispanic" category, combine Canadians and "Americans" into a North American group, combine all other whites who mentioned a country of origin (or two or three) in a miscellaneous group (including people who mentioned two or three groups but did not consider themselves closer to one or another), and left the "nones" as a separate category. The prevalence of Catholics among the Italians, Poles, and Hispanics precludes the use of much detail about husband's and wife's religion. We use a simple dichotomy that distinguishes between Catholics and all others. Table 2 shows the cross-classification of the 9-category ethnicity variable with the Catholic-other religious classification and sex for respondents and their spouses. To simplify the statistical modeling, we concatenate ethnicity and religion to convert the two variables into one 18-category variable that we refer to as "ethno-religious origin." There is no statistically significant difference between the ethnoreligious distribution of female respondents and the male respondents' reports of their wives' ethno-religious origins. Nor is there a significant difference between male respondents' own reports and the reports of female respondents about their husbands. Therefore, we drop the distinction between respondent and spouse and use husband's and wife's ethno-religious origin as the variables of analysis. The statistical modeling is done on the 18×18 husband-wife tables. The counts are given in the Appendix Table.

⁹ The few cases that report "Africa" as spouse's ethnicity are kept and coded with "other."

Table 2. Ethno-Religious Group of Respondent and Spouse by Sex of Respondent: Percentages of Ever-Married Adults, United States, 1985-1990

Ethno- Religious	Resp	ondents	Sı	oouses
Group	Men	Women	Wives	Husbande
Catholics				
Irish	4.5	3.8	5.1	4.0
German	3.9	4.3	3.0	3.8
British	.9	.8	.9	1.0
Polish	2.6	2.7	2.6	2.7
Italian	4.1	4.7	5.5	4.0
Hispanic	4.0	3.5	4.1	3.4
Other	5.3	6.4	5.6	5.4
American	1.9	1.4	2.2	2.0
None	3.6	3.0	3.1	3.5
Non-Catholics				
Irish	6.4	5.7	5.6	7.5
German	13.2	13.2	12.3	12.6
British	13.7	11.6	11.7	14.0
Polish	.8	.7	.8	.3
Italian	.7	.6	.3	.7
Hispanic	.4	.4	.3	.6
Other	13.7	15.3	13.9	13.4
American	3.7	3.7	3.9	4.0
None	16.6	18.3	19.2	17.0
Total percent	100.0	100.0	100.0	100.0
Number of cases	1,965	2,055	1,965	2,055

Intermarriage Model

The model for interethnic marriage draws on models of social mobility processes (Goodman 1979, 1984; Hout 1983, 1984; Sobel, Hout, and Duncan 1985). Let $i = 1, \dots, 18$ index the wife's ethno-religious group and i (= 1, ..., 18)index the husband's. We use the idea that the number of couples that combine groups i and j will be proportional to certain covariates of being in group i or group j. "Covariates" are quantities that describe attributes of groups i and j, such as the proportion of the group that is foreign born or the proportion who have gone to college. Pagnini and Morgan (1990) used these methods to study intermarriage in 1910. Johnson (1979), Mare (1991), and Kalmijn (1991) used these methods to study religious and educational homogamy.

In the model in equation 5, the expected number of couples with the combination of wife's ethno-religious group i and husband's group j is written as a multiplicative function of the size of the sample (β_0) , the relative sizes of groups i and j $(\beta_l$ and $\beta_j)$, the difference between the size of group j for husbands and the size of group j for wives (α_j) , and the covariates (X_{lk}) :

$$F_{ij} = \alpha_j \beta_i \beta_j \prod_{k=1}^K \theta_k^{X_k X_k}, \tag{5}$$

where the covariates are described below. The α_j terms can be dropped if the husbands' and wives' marginals are symmetrical (Sobel et al. 1985; Goodman 1987). Because all of the association parameters are symmetrical, the model in equation 5 is a special case of quasisymmetry (QS); without the α_j terms it is a special case of symmetry (Sobel et al. 1985).

The model in equation 5 might be easier to interpret as a model of association. Association is the statistical representation of homogamy and an inverse function of intermarriage. The weaker the association, the higher the rate of intermarriage. Of course intermarriage between two groups i and j can differ from that between i and some other group i', so we index association by i and j. Sobel et al. (1985) defined a measure of association that (adapting their terminology to intermarriage) is the geometric mean of the odds of a woman from group i marrying a man from group i relative to marrying a man from her own group (i) and the complementary odds of a woman from group i marrying a man from group i relative to marrying a man from group j:

$$\delta_{ij} = \sqrt{\frac{F_{ij}F_{ji}}{F_{it}F_{jj}}} \,. \tag{6}$$

Because inmarriage exceeds intermarriage for nearly all groups, δ_{ij} is less than 1 for most combinations of i and j. The difference between δ_{ij} and $\delta_{ij'}$ is proportional to the difference between intermarriage of persons from group i with persons from either group j or j', i.e., if $\delta_{ij} > \delta_{ij'}$, the persons from group i are more likely to marry persons from group j than from group j'. According to equation 5, intermarriage is higher for groups that are similar on the covariates than for groups that are different:

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Table 3. Covariates Used in the Analysis of Ethno-Religious Intermarriage

	8	
X	Keyword	Definition/Description
Ethnic	Group Terms	
X_{i1}	Catholic	1 if <i>i</i> is a Catholic category; 0 otherwise
X ₁₂	Irish	1 if <i>i</i> is an Irish category; 0 otherwise.
X _{t3}	German	1 if <i>i</i> is a German category; 0 otherwise.
X ₁₄	British	1 if <i>i</i> is a British category; 0 otherwise.
X ₁₅	Polish	1 if <i>i</i> is a Polish category; 0 otherwise.
, X ₁₆	Italian	1 if <i>i</i> is an Italian category; 0 otherwise.
Χn	Hispanic	1 if <i>i</i> is an Hispanic category; 0 otherwise.
X ₁₈	Other	1 if <i>i</i> is an Other category; 0 otherwise.
X ₁₉	American	1 if i is an American category; 0 otherwise.
X ₁₁₀	None	1 if <i>l</i> is a None category; 0 otherwise.
X_{l11}	Ethnic	$\sum_{k=2}^{10} X_{ik}$
Explan	atory Terms	
X_{i12}	Religious mix	Percentage Catholic (sq. rt.)
X ₍₁₃	Ethnic mix	Percentage naming only one ethnic group (sq. rt.)
<i>X</i> ₁₁₄	Foreign born	Percentage foreign born (sq. rt.)
<i>X</i> ₁₁₅	Education	Percentage with college degree or higher (sq. rt.)
$X_{g_{16}}$	Regional mix	Index of dissimilarity between the regional distributions of i and j ^a
Diagon	al Interaction Ter	ms
Z_{ij1}	Diagonal	1 if $i = j$;0 otherwise
Z_{ij2}	$Diag \times Religion$	$Z_{(1)} \times X_{(1)2}$
Z_{V3}	Diag × Ethnic	$Z_{01} \times X_{013}$
Z_{ij4}	Diag × Born	$Z_{i/1} \times X_{i/14}$
Z _{#5}	Diag × Educ.	$Z_{ij1} \times X_{i15}$

^{*} See Lieberson and Waters (1988:table 3.2).

$$\ln \delta_{ij} = -\frac{1}{2} \sum_{k=1}^{K} \ln \theta_k (X_{ik} - X_{jk})^2.$$
 (7)

In equation 7 it appears as though the covariates explain all of the association between husband's and wife's ethnicity because the equation is defined for expected frequencies instead of for observed ones. In fact there is a residual association that cannot be attributed to the covariates.¹⁰

The covariates in this study are described in Tables 3 and 4. The dummy variables for Catholic and each ethnic group assess the main effects of interest (i.e., the effects of religion and ethnicity on the pattern of ethno-religious intermarriage). Kalmijn (1991) has shown that the Protestant-Catholic boundary has become less salient during the last 50 years. Assuming a constant effect here would understate the importance of religious intermarriage for older cohorts and would overstate it for younger ones. Unfortunately, the data base is too thin to allow a cohort analysis without reducing the number of ethnic categories, and we are unwilling to trade detailed ethnicity, the focus of this study, for information on time.

The overall "ethnic" term (X_{l11}) formed by summing the individual ethnic terms is a construction useful for testing the hypothesis that ethnicity has but one effect (that is not zero but that does not vary across groups). The diagonal term (Z_{ii1}) measures the general level of inmarriage (constant across all groups). The other nine terms seek to explain the gross effects of religion and ethnicity in more substantive terms. "Religious mix" operationalizes the triple melting pot hypothesis that attributes higher rates of intermarriage of the Irish and Germans to their own religious divisions. The "ethnic mix" term captures past mixed marriages; it distinguishes between the ethnic groups respondents selected as "single mentions" from groups respondents indicated they felt "closest to" when they selected more than one group. Ethnic mix may also be a kind of lagged endogenous variable; groups with high rates of inmarriage in the past would have rela-

¹⁰ The residual reflects both the portion of the association accounted for by QS, i.e., the constraint that $\delta_{ij} = \delta_{jl}$ for all pairs (i, j), but not by the covariates (i.e., part of δ_{ij} but not $-1/2\sum_{k}\ln\theta_{k}(X_{ik}-X_{jk})^{2}$) and the asymmetric association not accounted for by QS.

Table 4. Values of Covariates Used in the Analysis of Ethno-Religious Intermarriage

				E	thnic Gro	up			
Measure	Irish	German	British	Polish	Italian	Hispanic	Other	American	None
Religious Mix	38.8	21.8	7.0	79.9	90.1	87.5	30.0	31.4	16.1
Ethnic Mix	48.6	66.1	52.7	75.6	75.9	86.8	60.2	54.1	0
Foreign Born									
Catholic	96.1	95.6	93.8	94.9	89.7	60.6	81.3	93.4	96.1
Other	99.3	97.8	96.9	74.7	95.7	69.7	93.8	98.4	99.3
Education									
Catholic	24.0	18.3	33.0	13.8	14.6	7.4	17.8	10.1	21.0
Other	11.5	17.6	27.0	34.2	18.3	10.7	23.1	7.6	14.5
Regional Mix									
Irish		15.5	10.8	31.6	32.7	36.5	3.3	19.6	3.3
German		_	24.1	27.7	37.9	41.7	16.2	30.8	16.2
British			_	40.9	40.5	40.9	8.3	11.8	8.3
Polish			_	_	22.0	37.7	33.8	43.5	33.8
Italian			_	_		31.5	35.3	45.2	35,3
Hispanic		_				******	36.0	46.4	36.0
Other			_		****	-		18.0	0
American	-	-	_	_	disease	******	_	_	18.0
None		_				******	_	_	

tively more single mentions than would groups with high rates of intermarriage. The "foreignborn" term operationalizes the generational hypothesis that intermarriage increases as direct connections to the old country wane (Lieberson and Waters 1988:218-21). "Education" assesses the effect of social distance on intermarriage. "Regional mix" operationalizes Lieberson and Waters' fix on Peach's hypothesis that proximity and isolation affect intermarriage. The diagonal interaction terms assess the special impact (if any) that religious mix, ethnic mix, foreign birth, and education have on inmarriage - there can be no diagonal effect of regional mix because the index of dissimilarity between any group and itself is zero by definition.

In the arriving generation, the ratio of men to women among immigrants is an important factor in intermarriage (Pagnini and Morgan 1990; McCaa 1991). Groups with a gender imbalance cannot achieve the same level of homogamy as immigrant groups with balanced sex ratios unless the "surplus" population returns to the old country or never marries in-

stead of marrying outside the group. We expect these effects to have lapsed for all but the Hispanics in our data; to the extent to which they are still important, they contribute to a significant α_l for Hispanics.

Total and Direct Effects of Religion and Ethnicity

We pursue a stepwise modeling strategy analogous to the "reduced form-structural form" strategy for assessing total and direct effects in path analysis (Alwin and Hauser 1975). If all differences in intermarriage patterns among the ethno-religious groups were due to these nine effects — religious mix, ethnic mix, foreign birth, education, regional mix, and the interaction of the first four with the diagonal effect — then the coefficients for Catholic and the individual ethnic categories would be insignificant when the other covariates were added to the model.

Table 5 presents the analysis of the total and direct effects of religion and ethnicity on inmarriage in six steps. The first step presents

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Table 5. Gross and Net Effects of Ethnicity on Inmarriage: Currently Married Whites With No More Than Three Groups Named

			M	lodel		
Effect	1	2	3 .	4	5	6
Diagonal	.435*	.484*	.437*	.337	.401*	.419 °
Catholic	1.574*	1.444*	1.373*	1.368*	1.354°	1.386*
Ethnic Group	.842*	*****	******	******	.296*	.319*
Irish		.270°	.261*	.228		_
German		.340*	.445*	.597*		
British		.296*	.125	.237		
Polish		1.346*	1.218°	1.117*		_
Italian		1.400*	1.306*	1.166*		_
Hispanic		4.205°	2.305*	2.312*		1.326*
Other		.524*	.498*	.550*		
American		1.087*	.950°	1.056*		_
None		1.123°	.495	.281	_	_
Religious mix (Cath	olic) —	********	1.401*	1.404*	.707	.969
Ethnic mix (single ci	hoice) —		1.040	1.048	1.304*	1.287*
Foreign born			.500°	.511*	.859*	.544*
Education			1.344*	1.264*	1.542*	1.359°
Regional mix			.303	.307	-1.047°	824 *
Diagonal ×						
Religious mix		*******		.669		_
Ethnic mix			Marine	746°		
Foreign born		managery	*****	.112		_
Education	_		******	.834	. -	
Goodness of Fit				•		
L^2	686.81	292.32	255.47	250.92	298.82	290.00
X ²	741.45	298.14	262.97	257.72	304.74	294.62
d.f.	286	278	273	269	281	280
bic ^a	-1,687	-2,015	-2,010	-1,982	-2,033	-2,034
$1 - \left(L_{to}^2/L_{to}^2\right)^b$.72	.88	.90	.90	.88	.88

^{*} p < .05 (two-tailed tests)

the simplest form of the model in equation 1 with a single degree of freedom for each main effect: inmarriage per se (diagonal), religious inmarriage that ignores ethnicity (Catholic), and undifferentiated ethnic inmarriage (ethnic). This is a powerful model, accounting for 72 percent of the total association between husband's and wife's ethno-religious group. Despite the statistical power of this model, its

hypothesis that all ethnic groups have the same propensity to homogamy is a substantial distortion. The model in column 2 shows a broad range of total inmarriage (net of religion and the general tendency to in-marry) from .270 for Irish to 4.205 for Hispanics (all are significant at the .05 level).

The remaining four columns of Table 5 show that the religious mix, foreign birth, education,

 $^{^{\}bullet}bic = L^2 - d.f. \times ln(N).$

 $^{^{}b}L_{0}^{2} = 2,488.26; X_{0}^{2} = 4,720.52; d.f. = 289; bic = 90; N = 4,020.$

and perhaps the ethnic mix and regional mix of the ethno-religious groups, account for some, but not all, of the differential inmarriage. Adding the main effects of these variables in column 3 reduces the extreme difference between Hispanics and others and also accounts for substantial fractions of the effects of being British or of having no ethnic identity (or a mix that precludes naming one as the "group I feel closest to"). The proportions Catholic, foreign born, and college educated are all significant. Ethnic mix (proportion single choice) has a moderately large coefficient. However, it also has a large standard error because it is the explanatory covariate that is most highly correlated with the ethnic terms. Adding the diagonal interaction terms (column 4) compounds the multicollinearity problem without substantially adding to the explanatory power of the model (bic actually changes in the wrong direction).

The ethnic terms and explanatory covariates explain virtually the same portion of the association (and identical proportions). Indeed, the model in column 5 is slightly preferable to the models that include the ethnic dummy variables, according to bic (Raftery 1986). In path analytic terms, when the direct effects of the predetermined variables are excluded and one looks only at the intervening variables, the key elements of ethno-religious intermarriage are the proportion single identifiers, foreign born, and college educated as well as the regional mix of the ethnic groups (i.e., the less similar two groups are in their regional mix, the lower their rate of intermarriage becomes). This model does not fully account for the special propensity of Hispanics to inmarry. Adding just the Hispanic ethnic term to model 5 improves fit (L^2) . A language variable (e.g., proportion who speak English at home), might capture this residual group-specific inmarriage. Regrettably the language data for each of these groups is not available.11

Whether the model in column 2, 3, 5, or 6 is chosen as the preferred model (they have similar *bic* values), some conclusions are clear. Religion is extremely important for intermarriage

patterns. Members of the Irish, British, and nonethnic white groups have the lowest net propensity to prefer members of their own group as marriage partners. This openness to other groups stems from their length of settlement in the United States which has resulted in previous high intermarriage rates (reflected in the low proportions of single choices), low proportions of foreign-born, high levels of education, and broad geographical dispersion. These factors weaken the barriers between any pair of ethnic groups. They are particularly efficacious among the Irish and British; these groups score high on the intermarrying end of each distribution, but not significantly higher than expected once these explanatory variables are held constant.

Although we do not attempt a trend analysis, we find a substantial association between the ethnic origins of marriage partners in recent data. The data mix recent marriages with marriages that took place long ago and survived into the present, so a trend from stronger to weaker association may lie unexamined in the data. The observation that ethnicity orders the marriage market to a significant degree remains to be disproved, however.

Another caveat is well known to demographers, but is worth repeating: Local communities might differ substantially in the salience of ethnicity for marriage. Size of community might be important (Poles have more opportunity to marry other Poles in Pittsburgh or Chicago where they are numerous than in Seattle or Phoenix where they are not). Furthermore, the awareness of ethnicity might differ (Lieberson 1985). Ethnicity is important in Chicago, not only because Chicago is large enough to support a high degree of ethnic differentiation, but also because ethnicity affects politics, neighborhoods, and social circles. Other cities, like Houston, Phoenix, and San Diego, and suburbs like Waters' (1990) Silicon Valley, have received fewer immigrants from Europe than internal migrants who are secondand third-generation Americans of European heritage. These cities, especially those that have large Latino or Asian immigrant communities, differentiate less among the European groups. This study estimates the average level of ethnic association for the United States as a whole. Some communities are both more ethnically heterogeneous and more conscious of ethnicity than average; we expect them to show

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¹¹ The GSS is administered only in English, so Latinos in the data set are either monolingual in English or bilingual. Persons monolingual in Spanish are outside the population sampled; including them would probably increase evidence of Latino homogamy.

a higher degree of ethnic association than our national average implies. Other communities are either ethnically homogenous or less ethnically conscious than the national average; we expect them to show a lower degree of ethnic association than our national average implies. A third category of communities emphasize some ethnic distinctions, but not others; they may differ from the national average, not only in the strength of ethnic association, but also in the pattern of that association in a way that would emphasize the distinctions that are relevant in that community while de-emphasizing others.

We conclude that religion and ethnicity organize the marriage market, and rates of intermarriage are higher for groups of the same faith. Rates are also high for groups that have internal religious divisions. Intermarriage increases with the passing of the immigrant generation(s) and when (or if) a group disperses throughout the country. Finally, once the taboo against intermarriage is broken, subsequent generations are more likely than the preceding generations to find partners from outside their group. Indeed these four factors religion, region, foreign birth, and regional dispersion - account for the contemporary ethnic differentiation among all of the European ethnic groups. The uniquely higher inmarriage among Hispanics suggests the importance of a language factor that probably affected intermarriage in earlier times for European groups from non-English-speaking countries (Pagnini and Morgan 1990).

CONCLUSION

Natural increase of a population is the interaction of demographic trends with the elapsed time between immigration and the present. Social increase stems from the joint effects of a high rate of intermarriage and the high probability that someone will express a particular ethnic attachment. For example, the social increase of the Irish and German populations in America has far outstripped their natural increase. This important subjective component of ethnic identity is beyond our data; we can only speculate on its sources and implications.

Second- and third-generation Americans, especially those of mixed heritage, exercise a significant level of choice in defining their ethnicity (Alba 1990; Waters 1990; Farley

1991). This has led to a certain unreliability in responses to ethnicity questions (Waters 1987; Farley 1991) and an alleged shallowness in the ethnic attachments reported to the Census. Our analysis has shown how the numbers of people identifying with two groups — the Germans and the Irish --- have increased because of this process. We have also shown how religious homogamy and the religious diversity of the Germans and the Irish combine to produce an intermarriage pattern that abets German and Irish ethnic identification, and how intermarriage has hurt identification with another outmarrying group, the British. We have also shown how numbers identifying themselves as Italian have grown, despite religious homogeneity, because of ethnic homogamy. We will not be surprised if the various Hispanic groups follow the Italian pattern in years to come.

Ethnic intermarriage is limited by religious homogamy and social homogamy. Groups that are affiliated with the same religion, have similar socioeconomic status, and live in the same parts of the country have much higher intermarriage than groups that differ in religion, education, and region. A past history of intermarriage and American residence are also important; groups with many mixed attachments and few foreign-born members intermarry more. The nine-fold increase of the Irish population in the United States stems from the combination of favorable outcomes on each of these variables for the Irish. The Irish have been in the United States a long time; they are religiously diverse, highly educated, and dispersed throughout the country. In addition, an unexplained subjective "closeness" to Ireland contributed to the size of the Irish American population in 1980.

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Appendix Table. Husband's Ethno-Religious Group by Wife's Ethno-Religious Group: Currently-Married Whites Married to Whites, United States, 1985-1990

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	႕	3	'n	7	7	-	0	7	4	4	14	ដ	14	-	-	0	17	31	31	∞	6	9	S	7	.	9	S	8	4	8	73	3	4	-	28	¥	8	;
	-	1	7		4	S	9	7	∞	6	10	11	12	13	14	15	16	17	18	-	7	m	4	ς,	9	7	∞	0	2	11	12	13	14	15	16	17	18	3
	-	17	17	11	17	17	17	11	11	11	17	17	11	17	17	17	17	17	17	18	128	190	28	18	18	18	18	198	18	18	18	18	18	18	18	18	18	,
	L _L	0	0	0		0	6	_	0	0	0	0	0	0	0		_	0		9	4	.	7	က		4	0	~	٠,	7	6	6	S	_		9	₹	:
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Note: Variables: I = husband's ethno-religious group, J = wife's ethno-religious group, F = count. Ethno-religious groups: I = Irish Catholic, 2 = German Catholic, 3 = British Catholic, 6 = Hispanic Catholic, 7 = other Catholic, 8 = American Catholic, 9 = none Catholic; 10 = Irish other, 11 = German other, 12 = British other, 13 = Polish other, 14 = Italian other, 15 = Hispanic other, 16 = other other, 17 = American other, 18 = none other.

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WHO WERE THE YUGOSLAVS? FAILED SOURCES OF A COMMON IDENTITY IN THE FORMER YUGOSLAVIA*

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Yugoslavia's leaders believed that a policy of equality among the many nationalities in Yugoslavia, in tandem with Communist Party hegemony, would allow nationalism within Yugoslavia to exist, mature, and finally diminish as a political force without jeopardizing the political stability and economic development of the country as a whole. Consequently the identification of people with their nationality was accepted to the neglect of an identity associated with the state as a whole. The expectation that a shared political agenda and the modernization of the society would weaken nationalism as a political force was not met. Instead, economic and political rivalries among the Yugoslav republics intensified nationalist feelings. In the early 1990s Yugoslavia's experiment in building a multinational state was replaced with open hostilities and warfare among the South Slavs. We identify four routes to Yugoslav self-identification and analyze the significance of these using survey data from 1985 and 1989, just prior to the break up of Yugoslavia. Urban residents, the young, those from nationally-mixed parentage, Communist Party members, and persons from minority nationalities in their republic were among those most likely to identify as Yugoslavs. None of these factors, however, proved sufficient to override the centrifugal forces of rising nationalism. Implications for political integration in Eastern Europe and the former Soviet Union are discussed.

The dream of nineteenth-century nationalism was that a common language, history, and habits of everyday life justified the formation of distinct nation states that would represent and protect ethnically homogeneous groups (Gertz 1973; Isaacs 1975; Rokkan 1975; Smith 1986). In the twentieth century states have developed a variety of political mechanisms to accommodate national diversity within their borders, including legal recognition of minority nationalities, proportionate seating in legislatures, and policies favoring economically disadvantaged nationalities and areas (Cohen

and Warwick 1983; Collins and Waller 1992; Enloe 1973; Nielsen 1985). In addition, industrialization and the establishment of modern mass institutions, such as education and mass communications, have been emphasized by state builders, in part with the expectation that these would erode the differences upon which national identities were based (Davis 1978: Hodson, Sekulic, and Massey forthcoming). In some states, such as France, national policies, industrialization, and mass institutions produced integrated national identities (Tilly 1975). In other cases the integrative consequences of these processes have been slower to develop; and in others, these processes may have exacerbated rather than eased national rivalries within states (Belanger and Pinard 1991; Hechter 1976; Olzak 1992; Tudjman 1981). Now, at the end of the twentieth century, a resurgence of claims, rivalries, and conflicts among national groups within states threaten the state-building accomplishments of past decades in many parts of the world.

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To establish a new, ethnically diverse state it is seen as critical that the people adopt a common identity as citizens of that state, as members of a unified political system composed of groups otherwise diverse in language, religion, customs, ethnicity, or historical experience. In such states, however, there is a tension between ethnic or national groups wanting to maintain their own sovereignty within the state and the state's need to integrate such groups into a cohesive political unit that represents a shared ideology and vision of the future (Kedouire 1960; Kohn 1961; Smith 1986). Symptomatic of this tension is the struggle over identity, with the particular national groups trying to preserve their identities and the state attempting to impose a new identity assimilating and subsuming the more particular identities.

The former Yugoslavia is an instance where the integrative processes of state identify formation have failed. Many of the underpinnings necessary to integrative processes were present in Yugoslavia, but they proved insufficient in the face of economic downturns and resurgent nationalist forces. We identify four potential routes that led people in the former Yugoslavia to identify themselves as members of a multinational state rather than as members of a specific nationality. We use data from two major social surveys done in Yugoslavia in 1985 and 1989 (just prior to the dissolution of the state) to examine the forces that facilitated or undermined the emergence of a shared Yugoslav identity.

ROUTES TO YUGOSLAV SELF-IDENTIFICATION

The first Yugoslav census after World War I did not record nationality, although the official name of the newly formed state was "The Kingdom of the Serbs, Croats, and Slovenes," clearly indicating its multinational character. This prompted historians to construct a picture of Yugoslavia based on religious affiliation and language spoken-imperfect substitutes for self-identification (Cohen and Warwick 1983: app. A). After World War II, nationality was recorded in the decennial census, but there was no Yugoslav category. "Yugoslav" was first included in the third post-war census in 1961. Officially this category was reserved for "nationally noncommitted persons," and was treated as a residual category for those who offered no particular national identity (Petrovic 1983). Table 1 presents the percentages of the population of Yugoslavia identifying as Yugoslav in 1961, 1971, and 1981.

The modest decline in self-identification as a Yugoslav for the country as a whole between 1961 and 1971 was primarily the result of a decline in Yugoslav identifiers in Bosnia-Hercegovina (hereafter referred to as Bosnia) in 1971. According to Ramet (1984:144-49), high Yugoslav self-identification in Bosnia in 1961 occurred because Moslems refused to identify themselves with dominant national groups (i.e., Serbs or Croats). The 1971 census was the first to allow "Moslem" as a nationality, and many Moslem Bosnians switched from the "Yugoslav" to the "Moslem" category in 1971. Moslems in Yugoslavia, many of whom live in Bosnia, are Slavs who adopted not only the Islamic faith, but also embraced many other cultural and linguistic features of the Turkish people who, during the period of the Ottoman Empire, controlled much of what would later become Yugoslavia.

Apart from Bosnia between 1961 and 1971 and Kosovo, self-identification as a Yugoslav shows a general pattern of increase from 1961 to 1981, especially in Croatia and the Voivodine, and in Bosnia between 1971 and 1981. Among the republics and provinces, Kosovo showed the lowest Yugoslav identification in 1971 and 1981, with most people in Kosovo identifying themselves as either Albanian or Serbian. One factor that encouraged identification as a Yugoslav was the heterogeneity of nationalities within the republic or province (Breuilly 1982; Diilas 1991). Contact between different nationalities is increased in heterogeneous settings leading to greater social mixing and intermarriage (Isaacs 1975). Bosnia and the Vojvodine were the former Yugoslavia's most nationally diverse areas, and both republics had larger than average proportions of people identifying as Yugoslavs.

The goal of our analysis is to identify the social forces that influenced the creation of a Yugoslav identity. Behind the social fact of "Yugoslav identification" lies a diversity of motives, inclinations, and rationales. We identify four sets of factors encouraging increased self-identification as a Yugoslav. These sets of factors constitute a tentative typology of identification with the state in multi-national societies and reveal the complexities and contra-

Table 1. Percentages of Adult Population of Yugoslavia Identifying Themselves as Yugoslavia in Yugoslavia and within Each Republic and Province: 1961, 1971, and 1981

	Percenta	ge Identifying as	Yugoslav	Pred	ominant
Geographic Area	1961	1971	1981		lity in 1981
All of Yugoslavia	1.7	1.3	5.4	36.3%	Serbian
Republics and Provinces					
Croatia	.4	1.9	8.2	75.1%	Croatian
Serbia	.2	1.4	4.8	85.4%	Serbian
Bosnia/Herzegovina	8.4	1.2	7.9	39.5%	Moslem
Kosovo	.5	.1	.1	77.4%	Albanian
Macedonia	.1	.2	.7 .	67.0%	Macedonian
Montenegro	.3	2.1	5.3	68.3%	Montenegro
Slovenia	.2	.4	1.4	90.5%	Slovenian
Vojvodina	.2	2.4	8.2	54.3%	Serbian

Sources: Statisticki Bilten SFRJ (No. 1295), 1982, Beograd, Yugoslavia: Government Printing Office. Statisticki Godisnjak SFRJ, 1981, Beograd, Yugoslavia: Government Printing Office.

dictions involved in attempts to create a new national identity.

Modernization

Yugoslavia experienced the transition from a primarily agricultural to a primarily industrial society during the post-World War II period (Bozic, Cirkovic, Ekmecic, and Dedijer 1973). Urbanization and increasing education and literacy were expected to diminish the salience of national identities as intergroup contact increased, as a shared national history developed, and as a prosperous national future emerged (Deutsch 1969:27). With industrialization came geographic mobility and greater contact among nationalities in urban areas, and identification as a Yugoslav became a means of easing social relations among individuals from disparate national backgrounds by minimizing cultural barriers and distinctions.

Political Participation

Creating symbolic representations of the new state as well as providing opportunities to participate in the rituals of history and patriotism are among the first efforts of new governments (Chirot 1988:72; Smith 1986). Tales of military sacrifice and victory, identification of common enemies, and images of shared destiny are promoted to support the image of a

unified people (Edelman 1971:164-68; Horowitz 1985). The War of National Liberation in Yugoslavia had been waged in order to end foreign occupation. Ideologically, the Yugoslav Partisans, who took power at the war's end, stressed the unity of all nationalities in the federal republic. Nationality as a divisive force was condemned by patriots, who remembered the partitioning of Yugoslavia during World War II and the foreign-inspired internecine warfare that cost hundreds of thousands of lives. Thus, to identify as a Yugoslav was to condemn the forces that betrayed the memory of the war and to identify with the efforts of the Partisans to create a progressive, socialist society.1 This legacy was carried forward in Yugoslavia by the Communist Party and also through workplace and community organizations (Burg 1983; Seroka and Smiljkovic 1986).

Demographic Factors

Yugoslav self-identification also provided individuals a means of avoiding competing claims to their national allegiance. This was especially important for the children of nationally-mixed marriages, where each parent might

¹ For further discussion of Partisan inspired loyalties to the concept of Yugoslavia, see Connor (1984:540 ff).

expect their child to recognize their particular national identity. By identifying as a Yugoslav, one could resist claims that others might make on one's identity and thus avoid potential conflicts. Yugoslav identification also provided a way of breaking with an increasingly discredited past, especially among younger personsit was a protest against traditional nationalist politics that seemed to be at the heart of the region's problems (Banac 1984). The recognition that much of Yugoslavia was less prosperous than the rest of Europe—an observation often reflected in Yugoslav popular cultureencouraged a Yugoslav identity as a reflection of hopes for greater integration into the European community. An important step in this direction was the abandonment of particularistic. traditional notions and movement toward a vague notion of "Europeanism." Yugoslav identification seemed closer to this ideal than more narrow ethnic or national identifications.

Majority/Minority Status

Yugoslav self-identification could also serve as a way to resist assimilating into a dominant national group, as was the case for Moslems in Bosnia in the 1961 census who identified as Yugoslavs rather than as Croats or Serbs (Stanovcic 1988). Persons of a minority nationality could claim a Yugoslav identity to resist pressure from the majority to assimilate into the local dominant nationality. For example, Serbian nationalists often interpreted Yugoslav identification by the Serb minority living in Croatia as a defensive response to unfavorable treatment by the Croat majority (Tomasevic 1975). Croatian nationalists made the same arguments on behalf of Croats in the Vojvodina (Bilandzic 1985). Identifying as a Yugoslav thus avoided either assimilating into the majority or labeling oneself as a minority. A similar motivation for adopting a shared identity as a citizen of a state was reported by Isaacs (1975) for India: "The educated ex-Untouchables dearly wished to shed their own group affiliations and their own group names, and, if they only could, become 'Indian' and be nothing else" (p. 81). Defensive identification as a Yugoslav has some similarities to the strategy of "passing" among ethnic and racial groups in the United States, although it is a distinct strategy in that the minority group does not seek to be assimilated, but rather to be identified as neutral.

Also, defensive Yugoslavism does not necessarily imply the same diminution of religious and cultural differences characteristic of assimilation (Alba 1990; Archdeacon 1983; Waters 1990).

BUILDING THE YUGOSLAV STATE AMID NATIONAL DIVERSITY

The Yugoslav Partisans who assumed power in 1945 understood that a policy of a unified nation-state, based on "imperialistic" attempts to deny nationhood to the many peoples making up Yugoslavia, would fail (Cohen and Warwick 1983; Shoup and Hoffman 1990). By defeating the Chetniks and their ideology of Serbian domination and condemning the Ustasa's vision of a Greater Croatia, the League of Communists of Yugoslavia (LCY) satisfied the national aspirations of the majority of people in Yugoslavia and gained widespread support among people for whom the ideals of a communist or socialist society had little relevance (Cohen 1982). At the same time the concept of a protective federation was attractive to smaller national groups, such as Macedonians, who felt threatened by Greece and Bulgaria. The tactic of the LCY, described by Connor (1984:19) as "strategic nationalism," was to recreate Yugoslavia after the war, but without insisting on a highly centralized Yugoslav nation-state reminiscent of the Serbian-dominated state of the interwar period.

Politically this objective entailed establishing a federation of equal nations (equal regardless of geographic size or population) while launching a policy of centralism within the LCY itself. The program of federalism was an important means of winning support in postwar Yugoslavia; it allowed the LCY to orchestrate the creation of a new society that would, in time, transform the lives of people and lead to the replacement of politics based on national identities with loyalty and identification with the new Yugoslav state (Horowitz 1985). Nationalism based on regional identities was also expected to decrease because of the geographic mixing of nationalities that had occurred during World War II and because of increased mobility that was part of the process of urbanization and modernization being enacted by the LCY (Bilandzic 1985).

Under Tito's leadership, the LCY was sanguine about the possible centrifugal tendencies of federalism leading to demands for a looser confederation. It was confident these tendencies could be controlled by the centralized party system (Denitch 1976; Lederer 1969:434-37; Rusinow 1977:33; Zwick 1983:80). In 1953 the LCY began a series of initiatives aimed at maintaining political integration in the face of growing nationalism (Ramet 1984:55-63). In the 1953 constitution the Chamber of Nationalities was eliminated and the Chamber of Producers was formed as a vehicle for the political representation of the worker self-management system first established in 1950 (Terzuolo 1982). Five years later, Kardelj (1960), one of the most vocal supporters of worker self-management, wrote that "on the basis of inexorable socio-economic tendencies . . . [there] will be even greater cultural merger of the Yugoslav peoples" (p. 54). He based his conclusion on several expectations. First, worker self-management would accelerate the pace of economic development. Second, particularistic loyalties (including nationality) would give way to working-class solidarity as people found political avenues open to them as representatives of self-managed enterprises. Third, worker self-management, as a form of classbased decentralized power in Yugoslav society, would reduce the threat of any one nationality controlling the fate of any other (Cohen and Warwick 1983:74-76).

Devolution of Power to the Republics

During the 1950s Yugoslavia experienced a rising GNP along with uneven regional development, setting the stage for economic nationalism between regions (Cohen and Warwick 1983:77). The gap between the republics—measured in productivity and personal income—widened (Lydall 1989:186–96). At the same time, worker self-management became a vehicle for the expression of local rather than class interests (Cohen and Warwick 1983:76).

From the mid-1960s onward the communist parties in the various republics saw themselves as representing their constituent "nations": Croatians in Croatia, Macedonians in Macedonia, Serbians in Serbia, and so forth (Ramet 1984; Cohen and Warwick 1983). In Bosnia the republic's League of Communists pursued policies designed to "protect" Moslems by counterbalancing Serbian and Croatian influ-

ence, and the League of Communists in the Vojvodina pursued greater autonomy from Serbia. Based on the organization of the League of Communists into republican wings, "nationalism not only pervaded the apparatus but, on many occasions, turned the party into the principal battlefield of ethnonational struggle" (Connor 1984:555).

Constitutional amendments adopted in 1967 reduced the power of the LCY at the federal level, in part as a reaction to the fear of increasing Serbian domination of the Party. Henceforth the LCY functioned more "like an association of eight regional Party machines than a centralized system of socialist leadership" (Cohen and Warwick 1983:145). Along with economic development, the LCY's role in political indoctrination, including control of the media, was still expected to erode the strength of nationalist sentiments even as regional rivalries and moves toward confederation were gaining strength (Tomc 1988). During this period the ability of Tito to maintain ultimate control through the LCY elite effectively countermanded the increasing autonomy of local Party organs on matters extending beyond local importance.

A new constitution in 1974 increased the trend toward a looser confederation as many of the responsibilities and prerogatives of the federal government were divested to the republics. A collective presidency was established along with the right of any republic to veto a decision by the presidency. The latter proved a major device in reducing the power of the federal government.

The system of worker self-management contributed to the decentralized political and economic structure of Yugoslavia. Worker selfmanagement reduced the power of the state to organize and coordinate the economy and gave primary economic power to republics and enterprises themselves. After 1954 the League of Communists in each republic exercised considerable influence over high-level appointments within firms, and local Party nomenklatura moved easily between the elite positions in firms and positions within the Party bureaucracy (Sekulic 1990). The weakness of federal control over the economy further fragmented the LCY and encouraged the League of Communists in each republic to take on an increasingly particularistic, and often nationalistic, agenda (Denitch 1991:77-79).

For tactical reasons Tito and the Partisan leadership that ruled Yugoslavia after the war had approached the issue of Yugoslavism indirectly. The expectation that the LCY could provide political unity in the context of multinational identities was supported by the belief that this move would buy time for economic development to erode particularistic identities. The support for nationalism, including the recognition of the "lesser nations" (Montenegrans, Macedonians, and Moslems), was also an attempt to undercut Serbia's dominance over the other republics and nationalities (Rusinow 1985); by recognizing more peoples as "nationalities" the aspirations of Serbian nationalism could be checked. Increased urbanization, reduced isolation of rural areas, higher educational attainment, an open opportunity structure, worker-managed enterprises, and nearly two generations of living as a single state were expected to reduce the political strength of nationalism, leaving it its place cultural traditions and ethnic pride held in common by all South Slavic people.

What actually transpired was increased fragmentation of identities and the development of political rivalries associated with nationalist claims. Yugoslav identification came to be seen as a threat to the republic-level Communist Parties that were increasingly going in separate directions as federated Yugoslavia began to unravel. The stage for collapse was set by growing economic gaps between republics, economic nationalism, a weak central government, and the political fragmentation of the LCY.

The Collapse of Yugoslavia

Today Yugoslavia has disintegrated. The South Slavs's experiment in building a unified state has failed as the various nationalities deny their common interests and seek to forge smaller, more nationally homogeneous states than the former Yugoslavia (Banac 1992). The economic crisis of the 1980s was an important catalyst for the disintegration of the union—living standards declined by at least a quarter, and inflation reached more than 2,500 percent in 1989. The legitimacy of the LCY was openly questioned by Communist leaders themselves, and most Yugoslavs desired to radically alter or abandon the system of worker self-management that had been the hallmark of

post-war Yugoslavia (Lydall 1989; Denitch 1991). In January 1990, the League of Communists of Yugoslavia ceased to exist, even as a symbolic unifying element, when the Slovenian delegation walked out of the Fourteenth National Congress.

System failure bred not only distrust, but provided political opportunities for ambitious individuals to link the distress of the people with national differences and historical resentments (Cviic 1990; Devetak 1988). Newly emerging leaders and former Communist Party leaders promoted nationalist pride and offered solutions marked by cultural atavism and sometimes by a desire to emulate more affluent nations. To many Western observers (e.g., Voirst 1991) the question, "Who are the Yugoslavs?" was asked as an expression of disbelief that the idea of Yugoslavia could so quickly be abandoned, first by the Slovenes and Croatians, soon to be followed by the Bosnian Moslems, and finally by the people of every national group in the former Yugoslavia.

The question, "Who were the Yugoslavs?" raises important questions about commonly held assumptions regarding the capability of states to foster unity among people with diverse cultures and historical experiences (Vuskovic 1982; Tomc 1988). The question also poses a dilemma for modernization theory, which assumes that the structural conditions of economic growth and its attendant institutional framework will negate particularistic loyalties and provide sufficient rewards for people to adopt the common outlooks, goals, and identities of a multinational state (Hodson et al. forthcoming; Nielsen 1985; see also Ragin 1979). Ç,

DATA AND VARIABLES

Data

We used information from two surveys in our analysis. The first survey was conducted in the fall of 1984 and the winter of 1985 by the Institute for Social Research in Zagreb, Yugoslavia. Using a disproportionate stratified random sampling framework, approximately 3,600 actively employed men and women in Croatia were interviewed, about 400 from each of nine occupational groupings. The nine groups were political functionaries, managers and directors, intellectuals and professionals, service work-

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Table 2.	Summary	Statistics	for Dependent	and	Independent	Variables	bу	Republic:	Yugoslavia,	1985	and 1989
	Surveys				_		-	•	-		

	1985 Survey		1989 Survey	
Variable	Croatia	Croatia	Bosnia	Serbie
Percent who identify as "Yugoslav"	10.6	9.0	14.4	4.6
Modernization				
Urban residence (1 through 3)	2.2	2.0	1.9	1.9
Education (years completed)	9.2	9.9	9.6	10.0
Read news (2 through 8)	5.0	4.6	4.4	4.4
Political Participation				
Communist Party (percentage)	23.6	22.9	37.4	38.3
Work organization (percentage)	17.0	21.0	21.0	22.5
Community organization (percentage)	15.0	15.7	19.2	20.4
Demographic Factor s				
Age (years)	38.7	39.4	38.1	40.5
Nationally-mixed parentage (percentage)	10.0	10.2	9.0	5.8
Majority/Minority Status			•	
Croat parentage (percentage)	71.4	72.7	17.6	0.3
Serb parentage (percentage)	14.4	12.8	28.3	84.6
Other homogenous parentage (percentage)	4.2	4.3	45.1	9.3
Number of cases	3,619	2,040	1,569	2,617

ers, three skill levels of manual workers, selfemployed "artisans," and peasants. Based on the 1985 census of Croatia, weights were applied to this sample to replicate the distribution of occupations in the active working population. After eliminating cases for which data are missing, the resultant sample for the analysis contains 3,619 cases. Women constitute approximately one-third of the sample, concordant with the distribution of women in the paid labor force.

In the winter of 1989–1990 a second survey of randomly selected households was conducted, this time in all six republics and the two "autonomous provinces" of the former Yugoslavia. The survey was conducted by the Consortium of Social Research Institutes of Yugoslavia. This survey design yielded greater numbers of respondents over 60 years of age than did the 1985 Croatian survey and, unlike the earlier survey, included unemployed persons. Unemployed persons and respondents over 69 years of age (the upper limit in 1985) were eliminated from our analysis to increase the comparability of the two samples.

We analyze data from 1989 for the three largest republics, Croatia (N = 2,040), Bosnia

(N = 1,569), and Serbia (N = 2,617). The addition of Bosnia and Serbia in the 1989 survey allow us to compare Croatia with the more nationally heterogeneous Bosnia and the more homogeneous Serbia.

Questions relevant for the analysis of Yugoslav self-identification were repeated in both the 1985 and 1989 surveys. Minor modifications in the wording of some questions in 1989 do not appear to have affected the results significantly in that similar models fit the data from both 1985 and 1989.

Dependent Variable

The dependent variable, self-identification, is measured by answers to a question asking the respondents' national identification. Most people answered Croat, Serb, Moslem, or some other nationality or ethnicity. In 1985 in Croatia, 10.6 percent of respondents responded "Yugoslav" (see Table 2); by 1989 this figure had dropped to 9.0 percent. In 1989 in Bosnia, the level of Yugoslav self-identification was more than 50 percent higher than in Croatia (14.4 percent), while in Serbia it was about 50 percent lower than in Croatia (4.6 percent).

Independent Variables

Our analysis suggests that four sets of factors influence the likelihood of identifying as a Yugoslav: modernization, political participation, demographic factors, and majority/minority status in a republic.

Modernization. We measure modernization using variables that tap urbanism, education, and access to the media. In 1985 respondents were asked if they lived in a village, town, or city. The majority answered city, with substantial minorities reporting that they lived in towns and villages. In 1989 respondents were asked if they lived in a village, a village center, a town, a town center, a city, or a regional center. The 1989 question format generated a better distribution of responses than did the 1985 format. It was impossible, however, to reclassify the 1989 responses to approximate the 1985 distribution and also remain faithful to the verbal options as they were presented in 1989. We chose to collapse the 1989 responses into the verbally analogous categories of the 1985 survey—village (= 1), town (= 2), and city (= 3)—resulting in a somewhat different distribution than in 1985. The average residential location in both 1985 and 1989 is a town. The slight reduction in the mean of urbanism between 1985 and 1989 in Croatia is likely an artifact of the change in question format.

To measure the effects of education and access to the media, we use the level of educational attainment of respondents and a measure of how frequently they read the news. Education is coded as years completed and averaged 10.0 in Serbia and 9.9 in Croatia in 1989. In Bosnia, average years of schooling was only slightly lower at 9.6 years. The measure of reading the news is based on two questions asked in each survey. In the 1989 survey, newspaper reading is measured by a question asking whether respondents read the newspaper never (= 1), monthly (= 2), weekly (= 3), or daily (= 4). Later in the questionnaire, respondents were asked to identify their three most common leisure activities. Some identified "reading news" as their most important leisure activity (= 4), others as their second most important activity (= 3), or their third most important activity (= 2), or not at all (= 1). Responses to these two questions were summed, creating an index of reading the news that ranges from 2 to 8. In 1985, respondents were

asked to respond on the same 4-level scale as in 1989 to questions asking how often they read newspapers and, separately, news magazines. These two variables from the 1985 survey were summed to again create an index of reading the news ranging from 2 to 8. The index for Croatia has a slightly higher mean value in 1985 than in 1989, and is slightly lower in Bosnia and Serbia in 1989 than in Croatia.

Political participation. Participation in the political system of Yugoslavia is expected to increase the likelihood of identifying as a Yugoslav. We measure three types of political involvement: membership in the LCY, holding office in workplace organizations, and holding office in community organizations. Each is coded as a dichotomous variable. Membership in the LCY was not an elite status; individuals who were LCY members should not be equated with LCY officials, who held elite positions and who disproportionately enjoyed the privileges to which such power provided access (Massey, Hodson, and Sekulic 1992). Nevertheless, Party membership should still indicate a greater commitment to explicitly articulated state goals. For both survey years, LCY membership is coded "yes" for those who either were members at the time of the survey or were members in the past. Considerably higher percentages report being, or having been, members of the LCY in Bosnia and Serbia than in Croatia.

Our other two measures of political involvement are holding office in political organizations in the workplace and in the community. Workplace and community organizations were frequently dominated by Party members and served as conduits for Party goals and agendas. Such organizations, however, were also frequently "captured" by local interests operating outside official Party mandates (Bilandzic 1985). In 1985 questions about holding office in workplace organizations were asked separately for worker self-managed enterprises and for other enterprises. Positive answers to either yielded a code of 1 (0 if both answers were negative). In 1989 a summary question asked if the respondent occupied an elected position at the workplace (yes = 1). Similarly, in 1985 separate questions were asked pertaining to holding office in organizations in the community dealing with either social or political activities. Office holding in either yielded a code

of 1. In 1989 these questions were combined, but a later question asked if respondents were active in community organizations. A positive response to either of these questions in 1989 resulted in a code of 1. In 1989 in Croatia, a higher percentage of respondents indicated they held office in workplace organizations than in 1985, but there were similar levels of participation in community organizations in 1985 and 1989. The higher percentage reporting participation in work organizations in 1989 than in 1985 may have occurred because the 1985 questionnaire was administered at the workplace where such participation would have been harder to manufacture. Bosnians and Serbians reported higher levels of participation in community organizations than Croatians (as well as higher levels of Party membership). Participation in work organizations was more nearly equal across the three republics in 1989.

Demographic factors. The third factor we expect to influence identifying as a Yugoslav is represented by the demographic characteristics of age and nationally-mixed parentage. The average age in each subsample ranges from 38 to 40. We determined nationallymixed parentage by comparing a respondent's answers to questions about the nationality of his or her mother and father. In Croatia in 1985, 10.0 percent of respondents reported that their parents were of different nationalities. For 1989 this figure is 10.2 percent. Nationallymixed parentage occurred at only a slightly lower level in Bosnia (9.0 percent). The level of nationally-mixed parentage was significantly lower in Serbia at 5.8 percent.

Majority/minority status. The final factor we expect to influence identification as a Yugoslav is the position of respondent's parents as a majority or minority nationality in their republic. We expect persons of minority parentage to self-identify as Yugoslavs at a higher rate than persons of majority parentage. Persons of Croatian parentage were in the majority in Croatia and persons of Serbian parentage were in the majority in Serbia. In Bosnia, Moslems were numerically dominant, followed by Serbs and Croats, although all three groups were well represented.

METHOD

We use logistic regression to analyze the pattern of self-identifying as a Yugoslav based on modernization, political participation, demographic factors, and majority/minority status. Logistic regression is appropriate for a binary dependent variable and allows utilization of both categorical and continuous independent variables. The regression coefficients from a logistic regression can also readily be translated into easily interpretable odds indicating the change in the likelihood of the dependent variable (identifying as a Yugoslav) given a unit shift in an independent variable.

RESULTS

The logistic regression coefficients estimating the effects of the modernization, political participation, demographic factors, and majority/minority status on Yugoslav self-identification for the combined sample are presented in Table 3. This model also yields coefficients estimating the net contrasts in Yugoslav self-identification between Croatia in 1985 and 1989 and between Croatia and the republics of Bosnia and Serbia in 1989.

The model estimated for the total sample is highly statistically significant—the variables in the model reduce the chi-square from the baseline model (with only the intercept included) by 1,573. Five of the 10 independent variables are statistically significant at the .001 level. Modernization theories of identity formation find support in a significant urban residence effect, but the effects of the other two modernization variables, education and reading the news, are not significant. Party membership strongly increases the likelihood of Yugoslav self-identification. Participation in community organizations also has a significant positive effect on identifying as a Yugoslav, but participation in work organizations has no significant effect. Both of the demographic variables, age and nationally-mixed parentage, are highly significant.2

² Non-linearity in the age and education effects was evaluated using 5-year cohorts and individual years of educational attainment. Dummy variables representing these categories were added to the equation separately for age and education. No significant nonlinearities were found for either age or education in either 1985 or 1989: Chi-square for age categories (d.f. = 9) was 12.12 in 1985 and 13.86 in 1989; chi-square for education categories (d.f. = 18) was 24.77 in 1985 and 27.56 in 1989. Of the 54 coefficients tested to evaluate nonlinearity

Table 3. Coefficients for the Logistic Regression of Yugoslav Self-Identification on Selected Independent Variables: Yugoslavia, 1985 and 1989

Independent Variable	Coefficient	Standard Error	Odds
Modernization			
Urbanism	.463***	(.056)	1.59
Education	020	(.014)	.98
Read news	.019	(.036)	1.02
Political Participation			
Communist Party	.472***	(.096)	1.60
Work organization	.015	(.106)	1.01
Community organization	.293*	(.123)	1.34
Demographic Factors			
Age	034***	(.004)	.97
Nationally-mixed parentage	2.449***	(.115)	11.58
Majority/Minority Status			
Croat parentage	949***	(.127)	.39
Serb parentage	003	(.121)	1.00
Other homogenous parentage (baseline)	.000		1.00
Net Contrasts			
Croatia 1985	.116	(.121)	1.12
Croatia 1989 (baseline	.000		1.00
Bosnia 1989	.296*	(.133)	1.35
Serbia 1989	-1.048 [↔]	(.148)	.35
Intercept	-2.24***		
χ^2 (d.f. = 13)	572.7***		
-2 log likelihood	4,501		
Number of cases	9,845		

^{*}p < .05 **p < .01 ***p < .001 (two-tailed tests)

Logistic regression coefficients are more interpretable when translated into odds by using the logistic coefficient as the exponent for the natural log function. For example, for nationally-mixed parentage, e^{2.449} equals 11.58. The latter coefficient indicates that, net of the other factors in the model, a one-unit shift in nationally-mixed parentage (from not having nationally-mixed parentage) increases the odds of identifying as a Yugoslav by more than 11 times. The effect of age can be interpreted as indicating

approximately a 3 percent decrease in the likelihood of identifying as a Yugoslav with each year of advancing age. The odds of self-identifying as a Yugoslav increase by about 60 percent for each increasing step of urbanism from village to town to city. Those who participate in community organizations are about one-third more likely to self-identify as a Yugoslav than those who do not participate. The odds of identifying as a Yugoslav are approximately 60 percent higher for Party members than for non-members.

To evaluate change across time in Yugoslav self-identification, we compared respondents in the 1985 Croatian sample to respondents in the 1989 Croatian sample. In 1985, Croatians were about 12 percent more likely to self-identify as Yugoslavs than in 1989, but this coefficient is not statistically significant and therefore may not be a reliable estimate. Differences between republics in Yugoslav self-identification are indicated by the contrasts between Croatia and Bosnia and between Croatia and Serbia in 1989. Bosnians were 35 percent more likely to self-identify as Yugoslavs than were Croatians, and this difference is statistically significant at the .05 level. Serbians were only 35 percent as likely to identify as Yugoslav as Croatians in 1989, and this difference is significant at the .001 level.

The effect of Croatian parentage on self-identification as a Yugoslav is significant at the .001 level. However, since Table 3 is based on the combined sample across the 1985 and 1989 surveys and across Croatia, Bosnia, and Serbia, this coefficient cannot be used to evaluate the hypothesis of defensive Yugoslavism which suggests that minority status in a republic will encourage self-identification as a Yugoslav. The appropriate tests of this hypothesis is presented later in Table 4, where the model is evaluated separately for each republic and time period.

It is possible that the various factors in our model of Yugoslav self-identification have different effects across time or across republics rather than uniform effects as assumed for the model evaluated in Table 3. Possible differences in the model across time and republics are evaluated in Table 4. This model is also required in order to test the hypothesis that minority groups within republics have a greater likelihood of identifying as Yugoslavs. The model fits each of the four subsamples well and

in age and education effects in 1985 and 1989, only 2 were statistically significant at the .05 level, and these formed no interpretable pattern.

Table 4. Odds Ratios from Logistic Regression Analysis of Yugoslav Self-Identification by Year and Republic: Yugoslavia, 1985 and 1989

		Odd	8	
_	1985 Survey		1989 Survey	
Independent Variable	Croatia	Croatia	Bosnia	Serbia
Modernization				
Urban residence	1.54***	1.17	2.21***.***	1.70 ↔
Education	.95*	1.01	1.02	1.02
Read news	.90	1.04	1.27**	1.25*
Political Participation				
Communist Party	1.58**	2.09**	1.59*	1.00*.†
Work organization	1.49*.	.67	.73	.97
Community organization	.85	1.62	1.19	2.20**
Demographic Factors				
Age	.97***	.96***	.97**	.95***
Nationally-mixed parentage	9.82***	9.68***	16.08	13.60***
Majority/Minority Status				
Croat parentage	.29***	.30**	1.22*.**	15.32**.††1
Serb parentage	1.12	1.31	.98	.73
Other homogeneous parentage	1.00	1.00	1.00	1.00
$\chi^2 (\mathrm{d.f.} = 10)$	581.4***	384.7***	333.0***	256.1***
-2 log likelihood	1,860	850	961	714
Number of cases	3,619	2,040	1,569	2,617
Chow test for interaction effects (d.f. = 10)	18.2	(reference group)	42.9***	34.2***

^{*}p < .05 **p < .01 ***p < .001 (two-tailed t-tests)

is statistically significant in each case; the contribution to chi-square (d.f. = 10) ranges from 581.4 in Croatia in 1985 to 256.1 in Serbia in 1989.

We used the 1989 survey in Croatia as a baseline for evaluating temporal and regional differences. We computed a Chow test to evaluate changes over time by selecting only the two Croatian subsamples and evaluating the contribution of a full set of interactions that allow the regression coefficients to differ in 1985 and 1989. These interactions reduce the chi-square (d.f. = 10) by 18.2, which is not statistically significant at the .05 level. The only interaction that is individually significant is for participation in work organizations, which increases self-identification as a Yugoslav in Croatia in 1985, but not in 1989. This contrast suggests that between 1985 and 1989 partici-

pation in work organizations became a less effective foundation for Yugoslav identification. This interpretation must be made with some caution, however, given that the overall contrast between 1985 and 1989 is not significant.

In contrast to the negative findings for temporal differences, the Chow tests for regional differences between Croatia and Bosnia in 1989 and between Croatia and Serbia in 1989 are statistically significant at the .001 level (with d.f. = 10, $\chi^2 = 42.9$ and 34.2, respectively). Several interactions are individually significant. Urban residence has a larger positive effect on Yugoslav self-identification in Bosnia, a less economically developed region, than in Croatia. In Croatia in 1989, each level of increasing urbanism increases the odds of self-identifying as a Yugoslav by a factor of 1.17 (which is not significantly different from 1.00).

 $^{^{\}dagger}p < .05$ $^{\dagger\dagger}p < .01$ $^{\dagger\dagger\dagger}p < .001$ (two-tailed t-tests indicating a significant difference when compared to Croatia in 1989)

^{*}Coefficient is not significantly different from 1.00, but is significantly different from Croatia in 1989.

In Bosnia, each level of increasing urbanism increases the odds of self-identifying as a Yugoslav by a factor of 2.21. In Serbia, the urban residence effect is statistically significant, but it is not significantly different from the effect in Croatia. A second difference in the models involves regional differences in the effects of Communist Party membership. Party membership increases Yugoslav self-identification most in Croatia in 1989, less in Bosnia, and in Serbia it has no effect at all. The difference between Croatia, where Party membership more than doubles the likelihood of identifying as a Yugoslav, and Serbia, where it has no effect at all, is statistically significant at the .05 level. The third significant interaction involves the negative effect of homogenous Croatian parentage on Yugoslav self-identification in Croatia. where Croatians are the majority, and its positive effects in Bosnia and Serbia, where Croatians are a minority. The higher level of Yugoslav self-identification associated with Croatian parentage is most dramatic in Serbia, where Croatians are a small minority. In Serbia, having Croatian parentage increases the likelihood of identifying as a Yugoslav by over 15 times. Respondents with Serb parentage were also more likely to identify as Yugoslavs if they lived as a minority in Croatia rather than as a member of the majority in Serbia, but this contrast is not statistically significant.

DISCUSSION

Identifying as a Yugoslav can occur through several possible routes—through modernization, political participation, demographic factors, and majority/minority status. Our analysis provides evidence for all four bases of Yugoslav identification.

Modernization effects are evident in the influence of urban residence in all three republics examined. Urbanism is one of the strongest and most consistent determinants of Yugoslav identification. This finding is consistent with the long-standing recognition that city living is associated with cosmopolitan attitudes (Wirth 1956). The declining influence of urbanism in Croatia between 1985 and 1989 may reflect the growth of Croatian nationalism during this period in the cultural and political capital of Zagreb. The lack of influence of education on self-identification as a Yugoslav, however, does not support modernization theory. Increased

educational attainment had been thought to be an important factor in helping to generate an increasingly cosmopolitan outlook and to facilitate the emergence of a common identification as Yugoslavs. That education did not increase Yugoslav self-identification may attest to republic-level control of curriculum content and the teaching of separate national histories in each republic (see Jelavich 1983). Any increase of cosmopolitan attitudes associated with higher education appears to have been cancelled out by the attraction of national identities as a basis for social identity and political mobilization. The control of newspapers by local and republic-level Party organizations may also be responsible for the limited influence of reading the news on Yugoslav self-identification. The limited effect of education and access to the mass media in encouraging Yugoslav identification thus suggests the success of the regional Parties' efforts to represent nationalist interests and to condemn Yugoslavism.

The image of partisan Yugoslavism based on political participation in Communist Party, workplace, or community political structures is supported by the finding that Party members were more likely to identify as Yugoslavs. Similarly, in at least some instances, participation in workplace or community organizations also increased the likelihood of identifying as a Yugoslav. Despite the Party's commitment to a multinational society and the growing nationalist agenda of republic-level Party organizations, those directly involved in the Party, at least outside of Serbia, were more likely to subscribe to the view that Communist Party members should be above the provincial attachments of the past and that their personal loyalties to the concept of a unified Yugoslavia should provide an example for others to fol-

The significance of age in the analysis supports the notion of demographic Yugoslavism. Young people were more likely to reject national identities in preference for identifying as a Yugoslav. In this manner they sought symbolic entry into the milieu of modernism associated with the broader European culture. Also notable is the powerful effect of nationally-mixed parentage, which reduced allegiance to national identities and allowed an opening for identification as a Yugoslav. Other demographic factors such as migration and increased contact with other nationalities may also have

been encapsulated in the effects of nationallymixed parentage.

The concept of Yugoslav identity as a defensive strategy for minority nationalities is supported by higher rates of Yugoslav identification among those with Croat parents in Bosnia and, most dramatically, Serbia. A similar pattern, though not statistically significant, exists for Serbs, with Yugoslav identification being more likely for Serbs living in Croatia as a minority group than for Serbs living in Serbia as a majority group. The difference between Croats and Serbs in this regard provides additional support for the hypothesis of defensive Yugoslavism for minority nationalities. Serbs were numerically, politically, and militarily dominant in the former Yugoslavia, and it appears that they felt less need to subscribe to Yugoslavism, whether they lived inside or outside Serbia. Croats, by contrast, when living outside Croatia, were likely to take on the more neutral and defensive posture of identifying as Yugoslavs. The higher aggregate level of Yugoslav identification in ethnically-mixed Bosnia than in more homogenous Croatia or Serbia lends further support to the image of Yugoslav identification as a defensive strategy for minorities.

CONCLUSIONS

Only a relatively small proportion of people in the former Yugoslavia ever expressed the social identity of being Yugoslavs. Many of the social and political underpinnings of an emergent shared identify, however, were in place and operating to increase the likelihood of Yugoslav identification. These included powerful influences for urban residence, intermarriage, and political participation, even participation in a Communist Party apparatus that itself was ambivalent about promoting a Yugoslav identity. It will remain unknown if these forces, given sufficient time, would ever have created a strong collective identity for the citizens of the former Yugoslavia as common members of a unified nation-state. While this failure to establish a shared identity among the people of this region cannot be said to explain the disintegration of Yugoslavia, it is apparent that a shared identity was not much in evidence as a mediating mechanism sustaining Yugoslavia through difficult transitions or slowing its disintegration into warring national camps.

The civil and military conflicts now underway in the former Yugoslavia and threatening to erupt in other parts of Eastern Europe and the former Soviet Union unmistakably exhibit elements based on nationalist fears, resentments, and hostilities. Emerging leaders of increasingly independent republics and states in these areas identify themselves with particular nationalities and claim to represent the interests of all those similarly identified, both within and outside currently defined boundaries. The end of Soviet hegemony and the eclipse of communist parties throughout Eastern Europe have provided new reminders of the strength of such nationalist feelings and claims.

The Yugoslav experience suggests that the path to a shared identity, either through political persuasion or through industrialization and development, is neither simple nor assured. In Yugoslavia, strong Communist Party leadership and the transformation of the economy from an agricultural to an industrial base were expected to erode the traditional bases for national differences. When worker self-management was introduced and the role of the LCY at the federal level diminished, however, economic nationalism and the creation of bastions of regional political strength were made possible. Rather than explicitly attacking nationalism as a source of divisiveness and instability, Yugoslavia's leaders, especially at the republic level, endorsed nationalism as a right within the context of equality among the nations of Yugoslavia.

The policies of Yugoslavia's leaders, at least as far as the national question is concerned, seemed both expedient and prudent. By emphasizing economic development, workplace democracy, economic and gender equality, tolerance for national differences, and equal legal rights of all citizens, Tito and his colleagues assumed that time was on their side and that the crises the state would inevitably face could be cast in other than nationalist terms. For the former Yugoslavia, history has proven these assumptions wrong. The playing out of conflicting nationalist forces in the 1990s in other parts of Eastern Europe and in the former Soviet Union provides a profound challenge to the political and social will of the people of these areas. And understanding these forces provides a profound challenge to sociological theory.

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IMBALANCED STRUCTURES, UNFAIR STRATEGIES: POWER AND JUSTICE IN SOCIAL EXCHANGE*

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We investigate how the balance of power in exchange relations affects actors' perceptions of the fairness of their partners' power strategies. If justice is in the eye of the beholder, as virtually all social psychological theories of justice assume, does its subjective nature work to the advantage of the powerful or the weak? Alternative perspectives on justice and power suggest competing hypotheses. One view proposes that norms of justice support and legitimate behavioral inequalities that favor the powerful; the second view argues that norms of justice counter and oppose the effects of power. Using an experimental design that allows us to manipulate structural power and behavioral strategies independently, we test hypotheses derived from these competing theories in relations of direct, nonnegotiated exchange. We find no evidence for an opposing effect of justice and substantial support for a legitimating effect. Most significantly, punishment strategies are perceived as more fair when used by exchange partners who are advantaged on reward power than when used by disadvantaged partners.

nterpersonal injustices are most likely to A arise in the context of structural inequality. Yet, as several writers have noted (Cook and Hegtvedt 1986; Cohen and Greenberg 1982), social psychologists have been curiously silent about the relation between structural power and perceptions of justice. Despite their common roots in the classical theories of social exchange (i.e., Blau 1964; Homans [1961] 1974), contemporary analyses of power and of justice rarely examine the linkages between the two. With few exceptions (e.g., Austin and Hatfield 1980; Cook and Hegtvedt 1986; Cohen 1986), theories of equity and justice do not consider how positions of structural power affect perceptions of justice and reactions to injustice. Similarly, most research on power examines the relations among structure, action, and distributions of outcomes, not judgments of fairness (see Cook and Emerson 1978; Cook, Hegtvedt, and Yamagishi 1988; and Stolte 1983 for exceptions).

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In this paper, we examine how the power relation between two actors affects one actor's perception of the fairness of the partner's behavior in relations of direct, nonnegotiated exchange. While structural power determines actors' capacities to affect each other's outcomes, actors in both stronger and weaker structural positions can use behavioral strategies that enhance their benefits or reduce their costs. We investigate how their partners evaluate and respond to these strategies. Are the targets of power strategies, such as reward withholding or punishment, more likely to perceive these strategies as fair when the partner who uses them is structurally advantaged in the relation (i.e., more powerful) or when the partner is disadvantaged?

The limited literature on the topic suggests two quite different answers to this question. One view proposes that power underlies and determines norms of justice (e.g., Austin and Hatfield 1980; Della Fave 1980; Homans 1976). Because powerful actors control norms as well as resources, structures of power and norms of justice will be mutually supportive; thus, beliefs about justice will legitimate behavioral inequalities that favor the powerful. A second view suggests the opposite: that norms of justice counter and oppose the effects of power by constraining powerful actors' use of

power or by encouraging the disadvantaged to resist its use (Cook and Emerson 1978; Cook et al. 1988). This view implies that people hold norms of justice that are at least partly independent of power.

Using an experimental design that allows us to manipulate structural power and behavioral strategies independently, we test a series of hypotheses based on these alternative perspectives. We examine both perceptions of injustice and behavioral reactions to injustice. Our study departs in three ways from most work on distributive justice: (1) We study justice in relations of two-way exchange rather than one-way allocation (Eckhoff 1974); (2) we study the fairness of dynamic behavioral strategies, not exchange outcomes; and (3) we study the fair use of both rewards and punishments in social exchange.

POWER AND SOCIAL EXCHANGE

Basic Concepts and Assumptions

Our analysis builds closely on the theory of social exchange originally developed by Emerson (1972a; 1972b). In its contemporary form, this theory applies to social interaction that meets several scope conditions: (1) Actors are dependent on one another for outcomes they value; (2) actors behave in ways that increase outcomes they positively value and decrease outcomes they negatively value; and (3) actors engage in recurring, mutually contingent exchanges with specific partners over time (Molm and Cook forthcoming).

Traditionally, social exchange theories were restricted to the exchange of positive (rewarding) outcomes, but recent extensions of Emerson's theory broaden its scope to include relations of dependence based on control over negative (punishing) outcomes as well (Molm 1987; Molm and Cook forthcoming). Whether exchange takes place in families, in organizations, or in international relations, most exchange relations involve the use of both rewards (e.g., approval, raises, trade incentives) and punishments (e.g., criticism, demotions, diplomatic expulsions) to obtain a mutually beneficial exchange relation. In this study we

are not interested in relations based solely on giving or withholding punishment, but in relations in which all actors have control over both rewards and punishments for each other. All actors are assumed to be motivated to increase their rewards and decrease their costs.

The simplest form of exchange occurs between two actors, A and B, who each control at least one resource that the other values. A resource is a possession (e.g., a material good) or behavioral capability (e.g., the capacity to provide friendship or political support) that is valued by the exchange partner. While the scope of social exchange includes both possessions and behavioral capabilities, two distinctions between them are important. Material goods are physically transferred from one actor to another in the process of exchange, and they entail an actual loss to the actor who provides them. In contrast, performing a behavior that produces positive or negative value for another (e.g., reading a colleague's paper and giving comments, voting against a colleague's proposal) involves no actual transfer of resources, does not deplete the actor's supply of resources, and primarily entails opportunity costs (i.e., the rewards foregone by not pursuing other alternatives). This is the kind of resource involved in most social exchanges and assumed by our theoretical model. To simplify the analysis, we also assume that the only costs to the actor are opportunity costs (other costs might include fatigue, effort, investment costs,

The mutual dependence of actors on one another for valued resources provides the structural basis for their power over each other. Power is an attribute of a relation, jointly determined by B's dependence on A (which gives A power over B), and A's dependence on B (which gives B power over A). If A and B are equally dependent on each other, power in the relation is balanced. If their dependencies are

someone's debt). Similarly, negative or punishing outcomes can be produced by either adding negative value (e.g., rebuke) or subtracting positive value (e.g., loss of status). Withholding potential rewards (rather than withdrawing existing rewards) can also act as punishment, if rewards were regularly administered in the past or were expected to continue in the future. Similarly, withholding potential punishments can act as a reward, although this form of reward is less common because the continuous application of punishment is rare.

¹ Positive or rewarding outcomes can be produced by either *adding* positive value (e.g., approval) or *subtracting* negative value (e.g., paying

unequal, power is *imbalanced*. The less dependent and more powerful actor has a structural *power advantage* in the relation equal to the difference between the two actors' dependencies on each other, and the less powerful actor is *power disadvantaged*.

One actor's dependence on another is, in turn, a function of two variables: value and alternatives. B's dependence on A increases with the value that B places on the exchange resources that A controls and decreases with the availability to B of alternative sources of those resources (Emerson 1972a). Those alternatives are typically other exchange relations that are potential sources of the same (or equivalent) resources (e.g., alternative dating partners, or alternative sources of advice on a political campaign). When connected by a focal actor, alternative relations form larger exchange networks consisting of three or more actors.

Consider, for example, a relation between a very senior member of an academic department (A) and a young hotshot in statistics (B). A values B's statistical expertise, and B values A's political support. While A has two other colleagues who are also sources of statistical advice, no other member in the department has A's political clout—without A's support, B has little chance of receiving tenure. Thus, while each is dependent on the other, A has a power advantage in the relation both because (1) tenure is more valuable than statistical advice, and (2) A has alternative sources of statistical advice, but B has no (equal) alternative source of political support.

As numerous studies show, the greater the power imbalance in an exchange relation, the more unequal the exchange (e.g., Cook and Emerson 1978; Markovsky, Willer, and Patton 1988; Molm 1985). The less dependent actor, who has a power advantage in the relation, will receive relatively more of the outcomes that he or she desires from the exchange at lower cost. In our example, we would expect that over time B will pay a higher and higher price for A's political support, first giving statistical advice, then actually doing A's statistical analyses, and so forth—all at little cost to A.

Our example illustrates a power relation based on control over positive outcomes, but the same principles apply to power that is based on the capacity to produce negative outcomes, or punishment, for the exchange partner. We label these two bases of structural power reward power and punishment power. A's punishment power over B increases with the negative value A can produce for B (e.g., an employer who has the capacity to fire rather than merely criticize an employee has greater power in the relation) and decreases with the availability of alternative exchange partners who can also punish B (e.g., the employer has less power in the relation if the employee's coworkers ostracize her for "rate-busting"). Within an exchange relation, reward power and punishment power can vary independently. For example, A might be advantaged on both reward and punishment power (a husband whose wife is highly dependent on him for both economic support and restraint from physical abuse), or disadvantaged on reward power but advantaged on punishment power (a low-level employee who has information that could destroy the boss's career).

The Use of Power

An important feature of Emerson's theory of power is its distinction between potential power, as determined by actors' structural dependencies, and the use of that power in interaction. Structural power determines the opportunities for and constraints on power use, but how actors use their power resources can affect the inequality of exchange within those boundaries (Bacharach and Lawler 1981; Molm 1990).

How actors use power depends on the form of exchange. Exchanges can be either negotiated or reciprocal (Emerson 1981; Molm and Cook forthcoming). In negotiated exchanges, actors engage in explicit bargaining to determine the terms of exchange; thus, both parties know what they are getting for what they are giving before they agree to an exchange. While negotiated exchanges are common in economic transactions and in some social exchanges (e.g., husbands and wives may negotiate who does what around the house), many social exchanges are reciprocal rather than negotiated. In reciprocal exchanges, actors initiate exchanges (with, for example, an offer of help) without knowing whether, when, or to what extent the other will reciprocate. If the other reciprocates, an exchange relation may evolve that consists of a series of sequentially contingent actions (e.g., you teach your colleague's class when he is sick, he comments on your

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paper, you help with his committee report, and so forth). Our interest, in this paper, is in the fair use of power in exchanges that are reciprocal.

In reciprocal exchange, actors can influence one another through contingent action. That is, they can selectively give or withhold rewards or punishments for exchange partners, contingent on the partner's prior behavior (e.g., a senator's vote on a bill is contingent on a contributor's campaign support; a husband greets his wife with stony silence whenever she works too late at the office). These conditional relations between an actor's rewarding or punishing actions and an exchange partner's prior behavior describe an actor's exchange strategies.²

Reciprocal, "tit-for-tat" strategies produce mutually contingent, symmetrical exchange (e.g., two neighbors exchanging favors). Our interest is in nonreciprocal strategies that use contingent action to increase an actor's advantage in exchange.3 These strategies, which represent the dynamic use of power, can be based on reward power or punishment power. An actor who uses a reward power strategy reciprocates the partner's reward exchange only part of the time, thus making rewards contingent on the other's greater giving (e.g., the friend who returns favors only occasionally). In economic terms, A obtains the advantages of B's exchange at lower cost; in operant terms, A has B on an intermittent reward schedule.4 An actor who uses a punishment power strategy contingently punishes a partner's nonexchange and either withholds punishment or gives rewards when the partner provides rewards (e.g., the lover who sulks until his partner agrees to his choice of movie).⁵

While these power strategies are more effective if backed by a structural advantage on the same base of power (reward or punishment), their use is by no means restricted to structurally advantaged actors. Some analyses suggest that power strategies are used to compensate for the lack of structural power; "creating strong behavioral contingencies is one way that structurally weak actors can make their less valuable resources more potent" (Molm 1990:445). Furthermore, Molm's (1990) work suggests that structure and strategy are only weakly related. Thus, they can be treated as separate, and relatively independent, dimensions of power.

Power strategies can be intentional techniques for obtaining advantage in exchange, but they need not be. Actors who are advantaged on reward power will reciprocate the other's rewards only intermittently, regardless of their intent to use power, simply because of their structural position of low dependence and the availability of attractive alternatives. We make no assumptions about the cognitions underlying the use of power strategies. As we discuss, however, attributions of intentionality by the targets of power strategies can affect their perceptions of the fairness of those strategies.

While power structures are sometimes determined by forces external to the actors within the structures (e.g., by the larger stratification system which differentially allocates resources to actors, or by enduring institutions such as the family), strategies are directly controlled by actors. In this study, structures represent the fixed context within which strategies vary. We examine how that context affects actors' evaluations of exchange partners' strategies.

² Our use of the term strategies is comparable in meaning to that of game theorists who study non-cooperative games (e.g., Axelrod 1984), which have decision structures like those of reciprocal exchange. The form that strategies can take in social exchange relations varies with the type of transaction, the structure of exchange, and so forth. For discussions of behavioral strategies in negotiated transactions, see Bacharach and Lawler (1981); for behavioral strategies in positively-connected exchange networks, see Marsden (1982); and for strategies that change the network structure itself, see Leik (1992).

³ Nonreciprocal strategies that help the target rather than the power user ("repaying evil with good") are outside our frame of interest.

⁴ As noted in footnote 1, reward withholding can be experienced as punishment if rewards have been received regularly prior to the withholding. Intermittent rewarding (what we call a reward power strategy), however, is not punishment.

⁵ Punishment for undesirable behavior is most effective when combined with rewards for desirable behavior (e.g., Axelrod 1983), and that is the kind of punishment strategy we study here. While the combination of punishments and rewards departs from a "pure" punishment strategy (i.e., punishing undesirable behavior and withholding punishment for desirable behavior), the combination provides a conservative test of our hypotheses (i.e., a pure punishment strategy should be perceived as even more unjust than the strategy we study).

JUSTICE AND POWER

Perceptions of Justice

Although there are many theories of justice, two major branches can be distinguished: theories of distributive justice and theories of procedural justice. Distributive justice concerns the fair allocation of outcomes (usually reward outcomes); procedural justice refers to the fairness of the process or procedures used in allocating outcomes.

Distributive justice is by far the dominant tradition, and procedural justice a more recent development. (See Cook and Hegtvedt [1983] and Markovsky and Hegtvedt [forthcoming] for reviews of this literature.) Theories of distributive justice have their roots in the social exchange theories of Homans (1974) and Adams (1965), but more recent formulations have moved away from the focus on justice in direct exchange relations to a more general formulation in which actors compare their actual outcomes to some standard of justice-i.e., what they think they ought to receive (e.g., Jasso 1980). This standard may be based on the outcomes that a specific other receives (an exchange partner or another recipient of an allocation) or on a general referential structure (e.g., "what all class 2 secretaries make" [Berger, Cohen, and Zelditch 1972]). Perceptions of injustice increase as an actor's actual rewards depart from this justice standard. Recently, formal theories have specified various mathematical forms of the relation between actual outcomes and the justice standard to which they are compared (e.g., Jasso 1980; Markovsky 1985).

Theories of procedural justice contend that judgments of fairness are a function not only of outcomes in relation to some standard of justice, but of the process or procedures through which those outcomes are obtained (e.g., Thibaut and Walker 1975; Lind and Tyler 1988; Leventhal, Karuza, and Fry 1980). The conceptions of process in this literature are quite limited, however, with much of the work concerning third-party procedures for settling legal disputes or rules and procedures in bureaucratic decision-making (e.g., the rules that university committees use to allocate internal research grants).

Our interest in the fairness of the dynamic process of power use is closer to the procedural justice tradition than to the distributive justice tradition, but departs from both in an important way. Despite their roots in the exchange tradition, both distributive and procedural justice pertain more to one-way allocations of resources across a set of actors than to direct, two-way exchange relations. Similarly, the vast majority of empirical research has been conducted in allocation settings, in which employers allocate pay to workers, criminal justice systems allocate punishment to offenders, or committees allocate benefits to applicants. All of those settings lack the defining feature of direct exchange relations: the contingency of benefit (or harm) given on benefit (or harm) received (Emerson 1981).

Following Eckhoff (1974), Blau (1964), Gouldner (1960), and others, we assume that the primary justice principle in direct exchange relations is the norm of reciprocity. We define reciprocity as consisting of three elements: (1) each actor's behavior is contingent on the other's, (2) acts are repaid by functionally equivalent acts (good by good; and harm by harm), and (3) the values of the outcomes received by each actor are approximately equal (Molm, Quist, and Wiseley 1993).

Nonreciprocal strategies violate this norm. Actors who use a reward power strategy reciprocate the other's reward exchange only part of the time; actors who use a punishment power strategy respond to the other's nonexchange with punishment. Both strategies should be judged less fair than reciprocal strategies. Our previous research supported this hypothesis for exchange relations with balanced power (Molm et al. 1993).

In this study, we investigate how evaluations of these power strategies are affected by the structural context in which they are used. While the power structure does not alter the extent to which power strategies violate the norm of reciprocity, it provides a context within which those departures may be perceived as more or less justified. Using an experimental design that independently varies both power structure and power strategy, we examine actors' perceptions of the fairness of their partners' reward and punishment power strategies when structural power on each of these two bases is: (1) imbalanced in favor of the actor using the power strategy, (2) imbalanced in favor of the target of power use, or (3) balanced.

We propose and test two sets of competing hypotheses derived from the alternative theories (balance theory and legitimation theory) described below. Both theories argue that the same strategies will evoke different evaluations of justice under different structural conditions; however, they propose different causal mechanisms and make sharply differing predictions.

Both theories also posit processes that presumably should produce similar perceptions of justice in both the user and the target of the power strategies. Numerous studies, however, suggest that self-interest biases justice evaluations (e.g., Hegtvedt 1990; Leventhal and Anderson 1970; Michaels, Edwards, and Acock 1984). If so, users should be more likely than targets to perceive power strategies as fair. Because we are primarily interested in targets' perceptions of power strategies, our study examines only their evaluations and reactions.

The balance hypothesis. Many exchange analyses have assumed that norms of justice counter and oppose the effects of structural power. Works by Cook and her associates show that when exchange partners in powerimbalanced relations are aware of the inequality of the distribution of rewards between them. power use declines, and exchange becomes more equal (Cook and Emerson 1978; Cook and Hegtvedt 1986; Cook et al. 1988). When informed of their structural advantage, powerful actors actually restrain their power use (Cook et al. 1988). This work suggests that power and justice norms are opposing forces and that norms of justice can affect the power strategies of actors.

This logic also suggests that power strategies should be perceived as more fair when they are used to oppose the structurally advantaged than when they are used to exploit the structurally disadvantaged. Underlying this reasoning is what Eckhoff (1974) calls a normative principle of balance: Acts that maintain or restore balance in an exchange relation are just, and acts that upset balance are unjust. According to this principle, power-imbalanced structures and nonreciprocal strategies are both unfair when considered individually, but when strategies are judged in the context of structure, those that oppose structural inequality should be perceived as more fair than those that support and reinforce it. If so, the targets of nonreciprocal strategies should perceive them as most unfair when the partner who uses them is power-advantaged in the relation, as *least* unfair when the partner is power-disadvantaged, and as intermediate in fairness when the relation between user and target is balanced on power.

The notion that norms of justice act in opposition to power also underlies theories that posit psychological feelings of injustice as a basis for rebellions, revolutions, or other forms of collective protest (e.g., Gurr 1970; Moore 1978; Jasso 1983). As Cook and Hegtvedt (1986) have pointed out, however, the analysis of collective reactions to injustice requires more than analyzing and aggregating individual feelings of injustice.

The legitimation hypothesis. The balance principle assumes that norms of justice are to some extent independent of structures of power. An alternative viewpoint suggests that power determines what is just through a set of cognitive and social processes that support and legitimate actions of the powerful. We are interested in this study only in the form of legitimation that Dornbusch and Scott (1975) call propriety—an individual's personal acceptance of a set of norms or behavior as right, proper, and just. Power that is legitimated by collective processes, such as endorsement or authorization (Zelditch and Walker 1984), or "earned" through performance is outside the scope of our study.

Several theories support the general prediction that differences in structural power will legitimate behavioral inequalities. Equity theorists (Austin and Hatfield 1980; Homans 1976) have argued that the powerful have the resources to persuade others that their inputs are deserving of greater reward, and that this process is buttressed by people's need to believe in a fair and equitable world (Lerner 1980). Della Fave (1980), drawing on Mead's (1934) theory of the self and Bem's (1967) theory of self-perception, proposed that over time individuals develop self-evaluations that are consistent with the rewards they receive from society; these self-evaluations legitimate the unequal distribution of rewards in society. Finally, work in the expectation states tradition suggests that people expect consistency between certain status characteristics of individuals and their reward levels (e.g., Berger et al. 1972; Cook 1975). While this tradition considers only how status affects expectations, power-which exchange theorists consider to

be the primary source of status—should operate in a similar manner.⁶

When applied to the perception of power strategies, the legitimation perspective suggests that individuals will develop expectations of an exchange partner's behavior toward them that are consistent with the structural position of the partner relative to their own. Those expectations, in turn, will affect perceptions of justice (Homans 1974; Berger et al. 1972). Thus, nonreciprocal strategies should be perceived as more just when used by poweradvantaged partners because they are congruent with the behavioral expectations attached to positions of power. In contrast, power-disadvantaged partners who use nonreciprocal strategies are behaving in ways that are contrary to the expectations attached to their structural positions.

Tests of Della Fave's (1980) theory have failed to support the notion that cognitive processes alone can legitimate the inequalities of power (Stolte 1983; Cook and Hegtvedt 1986; Steil 1983). Power-disadvantaged actors consistently evaluate their rewards as less fair than do power-advantaged actors. It is quite possible, however, for power to affect perceptions of justice, in a direction that would support the general legitimation hypothesis, without making inequality "fair." Thus, our version of this hypothesis does not propose that the targets of power strategies will come to perceive them as fair, but rather that they will judge the same strategies to be more unfair when used by structurally disadvantaged actors than when used by structurally advantaged actors.

The Base of Power and Justice

Of particular interest in this study is the question of how the relations among structure, strategy, and fairness vary for power strategies based on rewards or punishments. In an earlier study, we found that punishment strategies are perceived as significantly less fair than reward strategies that represent equivalent departures from reciprocity (Molm et al. 1993). Two cognitive tendencies underlie the greater perceived

injustice of punishment strategies: (1) the tendency for actors to perceive losses as more negative than equivalent gains are perceived as positive (Kahneman and Tversky 1979, 1984; Gray and Tallman 1987; Molm 1991), and (2) differences in the perceived intentionality of strategies based on reward or punishment.

The cognitive distortion of gains and losses implies that people will perceive the difference between punishment and nonexchange to be greater than the difference between reward and nonexchange. If so, responding to a partner's nonexchange with punishment (a punishment strategy) will be perceived as more nonreciprocal, and less fair, than responding to a partner's rewards with nonexchange (a reward strategy), even if the differences between the values of reward and nonexchange and of nonexchange and punishment are objectively the same.

The intentionality of acts has been linked to perceptions of justice by attribution theorists. The same act is more likely to be judged unfair (Cohen 1982; Utne and Kidd 1980) and to provoke behavioral efforts to restore justice (Garrett and Libby 1973; Hassebrauck 1987) if its negative consequences are perceived to be intentional. Because reward strategies are based on an act of omission (i.e., not reciprocating rewards) rather than commission, their intentionality is ambiguous. A pattern of intermittent rewards may represent the deliberate use of power (withholding rewards until the other gives more), or it may be an unintended byproduct of exchanging with a different, more desirable partner. No such ambiguity occurs in the voluntary use of punishment; punishment is an act of commission directed at a specific target. In support of this analysis, our earlier study (Molm et al. 1993) found that subjects judged punishment strategies as significantly more active and intentional than reward strategies.

In this study, we examine how the structural context within which these strategies are used affects judgments of their relative fairness. Because punishment strategies are viewed as more intentional than reward strategies and provoke stronger affective responses, perceptions of their fairness are more likely to be influenced by conditions that justify or fail to justify their use (Eckhoff 1974; Folger 1986). Consequently, we expect the structure of power to have a stronger effect on perceived justice

⁶We do not explicitly consider the effects of status, and we control for any effects of external status characteristics in our experimental study by eliminating face-to-face interaction and any cues that could convey status information.

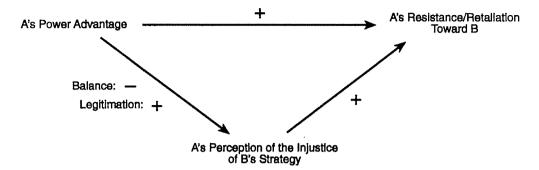


Figure 1. Theoretical Model of the Relations Between Structural Power, Perceptions of Injustice, and Behavioral Reactions in an Exchange Relation Between Actors A and B

for punishment strategies than for reward strategies.

Whether power advantage or power disadvantage justifies the use of punishment power, however, depends on which theoretical mechanism is operating—balance or legitimation. If the balance hypothesis is supported, the perceived fairness of reward and punishment strategies should be most equal when they are used by power-disadvantaged partners, and most unequal when used by power-advantaged partners. If the legitimation hypothesis is supported, the reverse should be true.

Regardless of which hypothesis is supported, we expect the effect of structural reward power to be stronger than the effect of structural punishment power. Punishment power affects the capacity to inflict harm and the risk of retaliation, but it is the dependence of actors on others for rewards that motivates the development of voluntary exchange relations and the use of both reward and punishment strategies.

Behavioral Reactions to Injustice

Virtually all justice theories assume that perceptions of injustice will lead to behavioral reactions and attempts to restore justice. In the exchange relations we study, actors can respond behaviorally to the perceived injustice of their partner's behavior in one of two ways: (1) passive resistance—withholding rewards from the partner, or (2) active retaliation—punishing the partner by removing some of the partner's existing rewards. Previous research shows that both reactions increase when exchange partners use nonreciprocal strategies in relations of balanced power (Molm et al. 1993).

When power is imbalanced, however, an

actor's resistance or retaliation must be a function not only of feelings of injustice, but of their structural capacity to resist or retaliate. Individuals in power-disadvantaged positions may comply with their partners' power strategies, no matter how unfair they judge them to be, because it is too costly to do otherwise (Blalock and Wilkin 1979; Burgess and Nielsen 1974). Those in power-advantaged positions, in contrast, have little reason to tolerate power strategies that are used by actors who lack the structural power to support them.

Thus, as shown in Figure 1, the structure of power can affect behavioral reactions to a partner's power strategies in two ways: directly, through its effects on an actor's capacity to resist or retaliate; and indirectly, through its effects on perceptions of injustice, which in turn affect the motivation to resist or retaliate.⁷

The legitimation hypothesis implies that these two paths will support each other: The perceived injustice of a partner's power strategy will increase with the actor's power advantage (and the partner's disadvantage) in the relation (the indirect path), as will the actor's capacity to retaliate and/or resist (the direct path). The motivation and the capacity to resist or re-

⁷ Our model assumes that justice judgments mediate the relation between structural power and behavioral reactions. However, some theories (e.g., cognitive consistency theories and affect control theory [Smith-Lovin and Heise 1988]) suggest that cognitive evaluations might follow rather than precede behavior—that actors justify their own use of resistance or retaliation by evaluating their partner's behavior as unfair. Because we measure justice judgments at the conclusion of the behavioral interaction, we cannot rule out this alternative interpretation.

taliate will be congruent. The balance hypothesis, instead, predicts that the two paths will oppose each other. Advantaged actors, who have the greatest capacity to resist or retaliate, will be least likely to judge the nonreciprocal strategies of their disadvantaged partners as unfair. And disadvantaged actors, who have the least capacity to resist or retaliate, will be most likely to judge their advantaged partners' strategies as unfair.

Hypotheses

We test five hypotheses, three of which make alternative predictions based on the mechanisms of balance or legitimation:

- H₁: The structure of power will modify the perceived fairness of exchange partners' nonreciprocal power strategies.
 - H_{1a}: Balance. Nonreciprocal strategies will be perceived as most unfair when they reinforce structural imbalance (i.e., when used by power-advantaged partners), as least unfair when they oppose structural imbalance (i.e., when used by power-disadvantaged partners), and as intermediate in fairness when used by partners in power-balanced relations.
 - H_{1b}: Legitimation. Nonreciprocal strategies will be perceived as most unfair when they are incongruent with a partner's position of power (i.e., when used by power-disadvantaged partners), as least unfair when they are congruent with power (i.e., when used by power-advantaged partners), and as intermediate in fairness when used by partners in power-balanced relations.
- H₂: Actors will perceive their partners' punishment strategies as more unfair than their reward strategies.
- H₃: The difference in perceived fairness of reward and punishment strategies will vary with the structure of exchange.
 - H_{3a}: Balance. The difference in perceived fairness will be greatest when these strategies are used by power-advantaged partners, least when

- used by power-disadvantaged partners, and intermediate when used by partners in power-balanced relations.
- H_{3b}: Legitimation. The difference in perceived fairness will be greatest when the strategies are used by power-disadvantaged partners, least when used by power-advantaged partners, and intermediate when used by partners in power-balanced relations.
- H₄: The effects of structure on perceived fairness predicted in Hypotheses 1 and 3 will be greater for reward power than for punishment power.
- H₅: Structural power will affect an actor's tendency to resist and/or retaliate against a partner's power strategy in two ways: (1) directly, by increasing the actor's capacity to resist or retaliate, and (2) indirectly, by affecting the actor's perception of the injustice of the partner's strategy.
 - H_{5a}: Balance. Support for the relations described in Hypothesis 1a imply a negative indirect effect that opposes the direct effect (see Figure 1).
 - H_{5b}: Legitimation. Support for the relations described in Hypothesis 1b imply a positive indirect effect that supports the direct effect (see Figure 1).

- 2

METHOD

Overview of the Design

We tested the hypotheses in a laboratory experiment. Undergraduate subjects earned money through reciprocal exchange with computer-simulated partners programmed to use particular strategies. Actors in the exchange network could either reward or punish their exchange partners by producing monetary gains or losses for them. The use of computer-simulated actors allowed us to create reward and punishment power strategies that were equivalent on all dimensions except power base and to compare them under equivalent conditions of structural power. Structural power imbalance and power strategy were manipulated for only one of the subject's two exchange relations; the relation with the other partner was

always power-balanced, and that partner always used a tit-for-tat strategy.

One hundred eighty subjects were randomly assigned to one of the 18 cells of a 3 × 3 × 2 factorial design with 10 subjects (5 males and 5 females) in each condition. The design crossed three levels of reward power with three levels of punishment power with two categories of power strategy (reward or punishment). Subjects engaged in nonnegotiated exchange for 100 opportunities. At the end of the exchange period, subjects evaluated the fairness of their partners' strategies and the fairness of the exchange structure on a series of semantic differential scales.

The Exchange Setting and Procedures

Subjects in the experiment participated in exchange networks composed ostensibly of four actors. Each actor in the network could exchange with two of the three other actors in the network, giving each actor two alternative (and mutually exclusive) partners on each exchange opportunity. Figure 2 shows the form of this network. (The exchange values in Figure 2 are explained below.)

In reality, both of the subject's (S's) potential exchange partners were computer-simulated actors (POs, or "programmed others"), and the fourth actor existed only as a hypothetical partner for the POs. The strategy of one PO was manipulated (PO_M), and the strategy of the

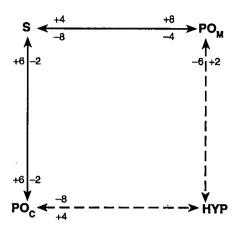


Figure 2. One of the Power Structures

Note: On each double arrow representing the exchange relation between two actors, the number closest to an actor is the number of points that actor can gain (+) or lose (-) from the other's action. The letters for the four actors designate the subject (S), the programmed actors with manipulated (PO_M) or controlled (PO_C) strategies, and the hypothetical fourth actor in the network (HYP). The dotted lines between the POs and HYP indicate that those relations were implied rather than real.

other was held constant (PO_C). This deception was easily maintained because subjects were seated in isolated rooms, interacted with each other only through a computer network, and did not meet each other before or after the experiment. Four subjects were typically scheduled for each experimental session, but each subject interacted with computer-simulated actors rather than with the other subjects. Post-experimental debriefing revealed that subjects did not suspect that their partners were computer-simulated actors.

Each actor in the network could perform behaviors to produce monetary gain (reward power) or monetary loss (punishment power) for each partner. These behaviors might represent, for example, an hour of advice to a coworker, or a vote against a colleague's proposal—actions that produce a specific amount of positive or negative value for the exchange partner. This behavioral capacity, not money per se, is the exchange resource in our experiment. In contrast to economic exchanges, money was not transferred from one actor to another. Money was used to operationalize the positive or negative value of exchange actions because of its advantages for experimental con-

⁸ Gender was not of theoretical interest in the study and was included in the design for control purposes only. Preliminary analyses of the data showed that gender had no effects on perceptions of justice; therefore, gender is excluded from the analyses presented here.

⁹Two of the conditions, those in which both reward power and punishment power were balanced and the simulated partner used either a reward strategy or a punishment strategy, were run as part of a previous experiment (Molm, Quist, and Wiseley 1993). That experiment was conducted in the same semester using subjects drawn from the same pool and using identical experimental procedures. We believe the cost savings justified the violation of strict randomization. Omitting these conditions altogether would not affect the results of the experiment; the observed differences between power advantage and power disadvantage would still hold. The balanced conditions primarily provided an additional data point to illustrate the linearity of the relations.

trol; it is easily quantified, widely valued by subjects, and resistant to satiation effects or diminishing marginal utility. Adding to the other actor's points did not reduce the subject's own earnings, and subtracting from the other's points did not increase the subject's own earnings. The only cost of initiating an exchange was the "opportunity cost" of not exchanging with an alternative partner. Earnings were totaled in points: One point equaled 3 cents.

The use of money also allowed us to create parallel forms of reward and punishment (and parallel structures of reward and punishment power) by operationalizing these concepts as gains or losses of the same valued outcome. In natural settings, the rewards and punishments controlled by actors are often qualitatively different (e.g., a supervisor might reward with a recommendation for promotion, but punish with verbal criticism or extra work), but for valid experimental comparisons of the theoretical differences between them, rewards and punishments must be identical on all dimensions except the defining difference of the sign of the outcome.¹⁰

Subjects engaged in reciprocal (nonnegotiated) transactions for 100 exchange opportunities. On each exchange opportunity, all actors chose: (1) which partner they would act toward on that opportunity (PO_C or PO_M), and (2) the action toward that partner (to add or subtract a fixed value). These two choices gave the subject a total of four behavioral options on each opportunity: reward PO_C, punish PO_C, reward PO_M, or punish PO_M. The value of each of those actions for the PO was determined by the structural manipulation of power (see below). Thus, subjects could vary how much value they added or subtracted only by varying the frequency of those behaviors. Because each side of an exchange was individually performed, subjects potentially could gain (or lose) money from one, both, or neither of their partners on each opportunity.

After all actors made their choices on each exchange opportunity, subjects were reminded

of their own choices and informed of their partners' choices (they were told that each partner added n points to their earnings, subtracted n points from their earnings, or did not act toward them on that opportunity). Their own point totals changed to reflect any gains or losses.

This information gave subjects a trial-by-trial account of their exchanges with their partners—information that provided the basis for them to form evaluations about their partners' strategies and to react to those strategies. Subjects were not provided with cumulative totals of the frequency of exchanges or of their partners' earnings. Such totals do not reflect the most characteristic feature of strategies, the contingencies between behaviors. We assume that subjects judge fairness on the basis of their cumulative experience with these contingencies throughout the interaction.

This experimental setting meets the scope conditions specified earlier. First, subjects were dependent on others for a valued outcome (money) and believed others to be dependent on them. Second, to assure that money was valued, subjects were recruited on the basis of their desire to earn money, other potentially valued outcomes were removed from the experimental setting, and subjects were instructed that their only concern should be earning as much as they could.11 Third, the assumption that social exchange relations consist of recurring exchanges between specific actors (Emerson 1981) is met by having subjects exchange with the same partners for 100 exchange opportunities. 12 (Subjects were not informed of the number of exchange opportunities.)

¹⁰ While our operationalizations of rewards and punishments are necessarily restricted to particular types (i.e., reward by the addition of positive outcomes and punishment by the subtraction of positive outcomes), different types of reward and punishment generally follow the same principles in their effects on behavior (e.g., Pazulinec, Meyerrose, and Sajwaj 1983).

While that instruction might inhibit justice concerns, the motivational assumption of social exchange theory requires that we assume actors are trying to increase their own benefits. Any dampening effect on justice evaluations or reactions affects all conditions equally and does not bias the results.

¹² The exchange period of 100 opportunities, while long in comparison with most experiments on negotiated exchange, is far shorter than previous experiments on reciprocal exchange (e.g., Molm 1990). Because the manipulated strategies influenced subjects' preferences for exchange partners, a longer exchange period would be likely to produce near extinction of exchange with one partner or the other. So that subjects' evaluations would be based on recent, salient experiences with both partners, the 100-opportunity length was chosen after pretesting.

Table 1. The Power Strategies of the Simulated Actors

	Probability of PO's Behavior, Conditional on the Subject's Prior Behavior						
Power Strategy	Conditional on Reward	Conditional on Nonexchange	Conditional on Punishment				
Strategy of PO _M (manipulated)							
Reward power strategy (nonreciprocal reward withholding)	RIR = .4 NIR = .6 PIR = 0	RIN = .1 $NIN = .9$ $PIN = 0$	RIP = 0 $NIP = .1$ $PIP = .9$				
Punishment power strategy (nonreciprocal punishment)	RIR = .9 NIR = .1 PIR = 0	RIN = .1 $NIN = .4$ $PIN = .5$	R P = 0 $N P = .1$ $P P = .9$				
Strategy of PO _C (control)							
Reciprocal strategy	RIR = .9 $NIR = .1$ $PIR = 0$	RIN = .1 $NIN = .9$ $PIN = 0$	RIP = 0 $NIP = .1$ $PIP = .9$				

Note: i | j = conditional probability of PO's behavior i at time t, given the occurrence of the subject's behavior j at time t - 1, where i and j = R (reward), N (nonexchange), and P (punishment).

The Manipulation of Strategies

The experiment manipulated the strategies of one of the programmed actors (PO_M) and held constant the strategy of the other (PO_C). The PO_M used either a reward power strategy or a punishment power strategy; the PO_C always used a reciprocal, modified tit-for-tat strategy. These strategies are shown in Table 1.

The strategies of the programmed actors specify the conditional probabilities of their behavior, given the subject's behavior on the previous exchange opportunity. On each opportunity, each actor could reward, punish, or not act toward a given partner (not acting toward one partner implied acting toward the other). Thus, the description of each PO's strategy consists of nine conditional probabilities specifying the probabilities with which the PO responded with each of these three actions given each of the three prior actions by the subject. In all conditions, both PO_M and PO_C rewarded the subject on the first opportunity.

The reciprocal strategy used by the PO_C in all conditions consisted of reciprocating the subject's prior behavior 90 percent of the time (i.e., responding to the subject's rewards with rewards, to punishment with punishment, and to nonexchange with nonexchange). The remaining 10 percent of the time, PO_C responded to the subject's rewarding with nonexchange, to the subject's nonexchange with rewarding,

and to the subject's punishing with nonexchange.

To create the reward and punishment power strategies, PO_M's response to either the subject's rewarding (reward strategy) or the subject's nonexchange (punishment strategy) was programmed to be nonreciprocal, while PO_M's response to the subject's other actions remained reciprocal. The probabilities in these conditions represent equal departures from the modified tit-for-tat strategy used by PO_C. In the reward strategy, the probability with which PO_M reciprocated the subject's rewarding was .4, or .5 lower than the .9 probability in the reciprocal strategy. The probability with which PO_M responded to the subject's rewarding with nonexchange was .6, or .5 higher than the .1 probability in the reciprocal strategy. As in the reciprocal strategy, PO_M reciprocated the subject's nonexchange and punishing with probabilities of .9.

In the punishment strategy, the probability with which PO_M reciprocated the subject's nonexchange was .4, or .5 lower than the .9 probability in the reciprocal strategy. The probability with which PO_M responded to the subject's nonexchange with punishment was .5, or .5 higher than the 0 probability in the reciprocal strategy.¹³ As in the reciprocal strates

¹³ Although the probabilities in the reward and punishment power strategies represent equal departures from the probabilities in the reciprocal strat-

	Structure of Reward Power (RP)						
Structure of Punishment Power (PP)	Imbalanced in S's Favor	Balanced	Imbalanced in PO _M 's Favor				
Imbalanced in S's Favor	S advantaged on both bases	S advantaged on PP	S disadvantaged on RP, advantaged on PP				
Balanced	S advantaged on RP	Equal power	S disadvantaged on RP				
Imbalanced in PO _M 's Favor	S advantaged on RP, disadvantaged on PP	S disadvantaged on PP	S disadvantaged on both bases				

egy, PO_M reciprocated the subject's rewarding and punishing with probabilities of .9.¹⁴

The Manipulation of Power Structure

Conceptually, power is a function of both the value of exchange and the availability of alternatives. We operationalized power by holding constant the number of alternatives for each actor while varying the relative value of the exchange resources controlled by an actor's two alternative partners. The total value that each actor in the network could potentially gain from both partners on any single exchange opportunity was held constant at 10 units; similarly, the total value that each actor could potentially lose from both partners was 10. B's power over A (and A's dependence on B) then consisted of the proportion of this total that B controlled. If, for example, the subject could gain 8 points from PO_{M} and 2 points from PO_{C} , then PO_M's reward power over the subject was

egy, they are not equal to one another in an absolute sense. Pretests suggested it was necessary to have PO_M occasionally respond to the subject's nonexchange by initiating reward exchange in order to assure some interaction with the subject in all conditions. Consequently, the probability of RIN was set at .1 and the probability of PIN at 0 in the reciprocal strategy, and a .5 increase in the probability of PIN in the punishment strategy produced a conditional probability of .5, rather than .6—the probability of NIR in the reward strategy.

¹⁴ The midlevel probabilities of NIR and PIN used for these strategies are necessarily somewhat arbitrary, and their effects cannot be assumed to generalize to other strategies based on higher or lower probabilities of these behaviors. We have no reason to expect, however, that the *interaction* between structure and strategy would be different in form for strategies of higher or lower probabilities.

.8 [8 / (8 + 2)] and PO_C 's reward power over the subject was .2 [2 / (8 + 2)]. And if PO_M could gain 4 points from the subject and 6 points from the hypothetical fourth actor, then the subject's reward power over PO_M was .4 [4 / (4 + 6)], and the reward power imbalance in the relation between the subject and the PO_M was .4 (.8 - .4) in PO_M 's favor. Punishment power and punishment power imbalance were calculated in the same way.

We manipulated the balance of the power relation between the subject and PO_M on both bases of power, while holding constant the balance of the relation between the subject and PO_C. For each power base, the relation between the subject and PO_M was either balanced, imbalanced in favor of PO_M, or imbalanced in favor of the subject. Crossing the three levels of power for each base created nine power structures (see Table 2).

When power was balanced on either base, each actor's power over the other was .5 (i.e., all actors in the network could add or subtract 5 points from each other on each exchange opportunity). When power was imbalanced on either base, the power imbalance was always .4 (i.e., the difference between the subject's power over PO_M and PO_M's power over the subject was .4). If the power imbalance favored PO_M, then PO_M's power over the subject was .8 and the subject's power over PO_M was .4. If the power imbalance favored the subject, the reverse was true.

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The exchange relation between the subject and PO_C was balanced in all conditions of the experiment, although the amount they could exchange with each other varied (i.e., a higher dependency of the subject on PO_M necessarily meant a lower dependency on PO_C, and vice versa). A balanced relation is consistent with

the reciprocal strategy used by PO_C in all conditions.

The power structure in Figure 2 illustrates one of the nine structures in the experiment. In this structure, both reward and punishment power are imbalanced in the subject's relation with PO_M, with imbalance equal to .4. The subject is advantaged on reward power (the subject's reward power over PO_M is .8, while PO_M's reward power over the subject is .4), but disadvantaged on punishment power (the subject's punishment power over PO_M is .4, while PO_M's punishment power over the subject is .8). The subject and PO_C are in a balanced relation on both power bases; each actor's reward power over the other is .6, and each actor's punishment power over the other is .2.

Throughout the exchange period, the values that the subject, PO_M, and PO_C could potentially gain or lose from each of their two exchange partners on each exchange opportunity were presented at the top of their computer screens. This information, which was called the "earnings schedule," allowed subjects to infer the relative dependencies in the relations between themselves and each of the POs. 15

The different experimental conditions created very different opportunities for subjects to earn money through exchange. Because research suggests that the absolute amount of reward that an actor receives can affect evaluations of justice (e.g., Michaels et al. 1984), we made an effort to equalize the number of points subjects ended up with by giving subjects an initial number of points, at the start of the experiment, that varied by condition. The initial amounts were determined by calculating the expected values of the subject's alternative behavioral choices, based on the manipulated val-

You Can Gain: PO_C Can Gain: PO_M Can Gain: 6 pts. from PO_C 6 pts. from You 8 pts. from You 4 pts. from PO_M 4 pts. from HYP 2 pts. from HYP

You Can Lose: PO_C Can Lose: PO_M Can Lose:

2 pts. from PO_C 2 pts. from You 4 pts. from You

8 pts. from PO_M 8 pts. from HYP 6 pts. from HYP

ues of structure and strategy. Subjects with lower expected earnings began with more money, and those in conditions with higher expected earnings began with less money.

Measures

Perceived justice. At the conclusion of the 100 exchange opportunities, subjects responded to a questionnaire that appeared on their terminal screens. They were first asked to evaluate PO_M's behavior toward them on a series of seven-point semantic differential scales. Next, they were asked to evaluate PO_C's behavior. And finally, they evaluated the earnings schedule.

Three items on which subjects evaluated their simulated partners' behavior are indicators of perceived justice: fair/unfair, just/unjust. and equitable/inequitable. Fair/unfair was the first item presented, and the remaining two (just and equitable) were included within the first six items, with neutral items in between. Correlations of these three items with each other were .65 or higher for evaluations of PO_M's behavior. They were summed to form a scale with an alpha reliability of .87 (for the fairness of PO_M's behavior) and .67 (for the fairness of POc's behavior). 16 The scale has a potential range of 3 (very unfair) to 21 (very fair), with a midpoint of 12. Table 3 shows subjects' mean evaluations of the fairness of PO_M's behavior, which we use to test the hypotheses.

Subjects also evaluated the fairness of the earnings schedule (i.e., the power structure as it was presented to them). This individual item had a range of 1 (very unfair) to 7 (very fair), with a midpoint of 4. In addition, two items on the questionnaire, also with ranges of 1 to 7, measured subjects' assessments of their partners' behavior as intentional/unintentional and

¹⁵ The format of the earnings schedule is shown below, using the values in the power structure in Figure 2. "You" refers to the subject. In the experiment, the subject's two partners were labeled "W" (the PO_C) and "Y" (the PO_M), and the hypothetical fourth actor (HYP) was "Z." The subject was "X." Here, those letters are replaced by the labels used in Figure 2:

 $^{^{16}}$ The lower reliability for PO_C results from the low correlations of "equitable" with "fair" and "just" (r=.28 and .38, respectively). In contrast, "fair" and "just" correlated .62 with each other. A higher reliability, .77, would have been achieved by combining only the two items, fair and just, in the scale. However, our primary interest was not in the subject's evaluation of PO_C, but in the subject's evaluation of PO_M, and a scale based on all three items was highly reliable for the latter. Therefore, a three-item scale was used for the subject's evaluations of both POs for the analyses.

Table 3.	Means and Standard Deviations	of Subjects' Perce	entions of the Fairness of Po	ha's Behavior
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	S	tructure of Reward Pow	'er
Structure of Punishment Power	Imbalanced in S's Favor	Balanced	Imbalanced in PO _M 's Favor
Imbalanced in S's Favor			
Reward strategy	13.4	13.9	15.4
	(3.8)	(4.0)	(3.0)
Punishment strategy	6.1	7.4	16.2
	(2.6)	(3.2)	(3.6)
Balanced			
Reward strategy	12.6	14.6	15.0
	(4.8)	(3.7)	(4.9)
Punishment strategy	7.8	10.2	15.3
	(5.3)	(3.2)	(4.4)
Imbalanced in PO _M 's Favor			
Reward strategy	14.8	14.5	14.6
	(3.5)	(3.5)	(1.8)
Punishment strategy	8.1	12.4	15.1
	(4.1)	(5.0)	(5.7)

Note: Scale values for fairness of PO_M's behavior range from 3 to 21. Numbers in parentheses are standard deviations.

active/passive. These items allow us to examine the relation of perceived intent to the base of strategy and the predicted interaction between structure and base of strategy.

Behavioral reactions. Subjects in the experiment could respond to the power strategies used by PO_M in one of two ways: through passive resistance (withholding rewards from PO_M) or active retaliation (punishing PO_M, by subtracting points). We measure the frequency of these responses by the proportion of exchange opportunities on which the subject rewarded and punished PO_M. The subject's rewards to PO_M represent the inverse of resistance (i.e., the more frequently the subject rewarded PO_M, the lower the subject's resistance). Table 4 shows the mean values for these variables by condition.

RESULTS

Perceived Fairness of Strategies

To test the first four hypotheses, we conducted a three-way analysis of variance on subjects' evaluations of the fairness of PO_M's behavior. Hypotheses 1 through 3 predict a main effect of structure (Hypotheses 1a and 1b), a main effect of strategy (Hypothesis 2), and an interaction between structure and strategy, with struc-

ture modifying the size of the strategy effect (Hypotheses 3a and 3b). The two sets of hypotheses based on balance and legitimation mechanisms differ, however, in the ordering of the effects they predict for structure. The balance hypotheses (Hypotheses 1a and 3a) propose the greatest perceived injustice (and strongest strategy effect) when PO_M is advantaged and the least injustice (and weakest strategy effect) when PO_M is disadvantaged. The legitimation hypotheses (Hypotheses 1b and 3b) instead predict the greatest injustice (and strongest strategy effect) when PO_M is disadvantaged and the least injustice (and weakest strategy effect) when PO_M is advantaged. Finally, Hypothesis 4 predicts that reward power will have stronger effects than punishment power, regardless of whether the balance or legitimation hypotheses are supported.

Table 5 reports the results of the analysis. The main effect of strategy replicates the finding of our previous experiment and supports the second hypothesis: Punishment strategies are perceived as more unfair than equally non-reciprocal reward strategies. As predicted by Hypotheses 1 and 3, the structure of reward power has a significant main effect on perceived fairness and a significant interaction with strategy. The structure of punishment power has no main or interaction effects on

Table 4. Means and Standard Deviations of Subjects' Behavioral Reactions Toward POM

	S	tructure of Reward Pow	er
Structure of Punishment Power	Imbalanced in S's Favor	Balanced	Imbalanced in PO _M 's Favor
MEAN FREQUENCY OF SUBJECTS	S' REWARDS		
Imbalanced in S's Favor			
Reward strategy	.21	.30	.45
	(.11)	(.16)	(.10)
Punishment strategy	.30	.41	.77
	(.13)	(.11)	(.18)
Balanced			
Reward strategy	.18	.28	.49
	(.09)	(.11)	(.07)
Punishment strategy	.28	.51	.76
	(.11)	(.15)	(.18)
Imbalanced in PO _M 's Favor			
Reward strategy	.18	.29	.50
	(.08)	(.15)	(.15)
Punishment strategy	.45	.62	.72
	(.21)	(.16)	(.23)
MEAN FREQUENCY OF SUBJECTS	S' PUNISHMENTS		
Imbalanced in S's Favor			
Reward strategy	.05	.02	.04
	(.10)	(.05)	(.06)
Punishment strategy	.10	.10	.04
	(.07)	(.08)	(.05)
Balanced			
Reward strategy	.02	.05	.02
	. (.03)	(.09)	(.03)
Punishment strategy	.12	.06	.05
	(.12)	(.04)	(.05)
Imbalanced in POM's Favor			
Reward strategy	.04	.01	.00
	(.07)	(.02)	(.01)
Punishment strategy	.06	.05	.02
	(.08)	(.04)	(.03)

Note: Means are proportions of the 100 exchange opportunities in which each behavior occurred. Numbers in parentheses are standard deviations.

subjects' perceptions of the fairness of PO_M's behavior. Thus, Hypothesis 4—that the effects of reward power will be stronger than the effects of punishment power—is also supported, although rather more strongly than we anticipated.

Our greatest interest is in the direction of the main and interactive effects of reward power. Two-tailed *t*-tests of the differences in mean fairness among the three levels of reward power, both across and within strategy conditions, provide strong support for the legitimation hypotheses and no support for the balance hypotheses. As Hypothesis 1b predicts, sub-

jects' perceptions of the fairness of PO_M 's strategy increase with PO_M 's power advantage in the relation. For the main effect of reward power, mean fairness is 10.47 when PO_M is power-disadvantaged, 12.17 when power is equal, and 15.27 when PO_M is power-advantaged. Each level of greater power produces a substantial increment in perceived fairness (t = 1.93, p = .06 for the difference between equal power and PO_M 's power disadvantage; t = 4.01, p < .001 for the difference between PO_M 's power advantage and equal power).

An examination of the interaction between reward power and strategy reveals that this ef-

Table 5.	Analysis of Variance of Subjects' Perceptions
	of the Fairness of POw's Behavior

Source	d.f.	Mean Sum of Squares	F
Reward power (RP)	2	137.41	15.99***
Punishment power (PP)	2	11.01	1.28
PO _M 's strategy (S)	1	310.00	37.24***
RP × S	2	85.02	9.89***
PP × S	2	12.05	1.40
$RP \times PP$	4	5.46	.64
$RP \times PP \times S$	4	3.99	, .46
Explained	17	49.93	5.81***
Residual	162	8.59	
*p < .05 **p < .0)1	***p < .001	

fect of reward power occurs only when PO_M uses a punishment strategy (the respective means are 7.33, 10.00, and 15.53). When a reward strategy is used, the increases in evaluations of fairness are smaller and nonsignificant (the respective means are 13.6, 14.3, and 15). In support of Hypothesis 3b and the legitimation principle, the difference between the perceived fairness of PO_M's reward strategy and the perceived fairness of PO_M's punishment strategy decreases with POM's reward power, becoming nonsignificant when PO_M is advantaged on reward power (t = 5.97, p < .001when PO_M is power-disadvantaged, t = 4.23, p< .001 when PO_M is equal in power, and t =.52 when PO_M is power-advantaged, all tests two-tailed).

In summary, these results show that an exchange partner's use of punishment is more likely to be judged "fair" as the partner's relative reward power in the relation increases. This finding supports the predictions of the legitimation hypotheses—that reward power legitimates the use of punishment.

Additional analyses support the logic underlying our prediction of an interaction between structure and strategy. Subjects perceived the use of a punishment strategy as significantly more intentional ($F_{1,162} = 45.19$, p < .001) and active ($F_{1,162} = 132.09$, p < .001) than a reward strategy. We also examined, with multiple regression, whether the impact of reward power on subjects' perceptions of fairness increased with perceived intent. As expected, the addition of multiplicative interaction terms between

perceived intent and two dummy variables representing reward structure significantly increased the R^2 for perceptions of fairness (F change = 7.21; p < .001), and the positive sign of the coefficients for the interaction terms indicates that the effect of reward structure on perceptions of fairness increases with perceived intent.

Other perceptions of justice. We also examined subjects' perceptions of the fairness of POc's behavior—the simulated actor who always used a modified tit-for-tat strategy-and of the fairness of the earnings schedule (the structure of power and dependence in the exchange network). Only reward power had a significant effect ($F_{2.162} = 5.1, p < .01$) on subjects' perceptions of the fairness of POc's behavior. Subjects perceived PO_C as more fair when they were advantaged in power relative to PO_M than when they were equal or disadvantaged in power. It is likely that this response reflects the greater mutual reward dependence between the subject and POc that necessarily results when the subject is less dependent on PO_M. No other main or interaction effects were close to significance. In all conditions, subjects' evaluations of POc's fairness were well above the midpoint value of 12 (overall mean = 18.55, s.d. = 2.53), and there was no overlap between the condition means for PO_M and PO_C (the highest condition mean for PO_M was 16.2, and the lowest mean for PO_C was 16.3).

Finally, both bases of structural power significantly affected subjects' perceptions of the fairness of the earnings schedule ($F_{2,162} = 5.22$, p < .01 for reward power; $F_{2,162} = 3.90$, p < .05 for punishment power). T-tests of differences among the conditions show that subjects judged the schedule to be more fair to participants when both bases of power were balanced than when they were imbalanced, in either direction. Again, reward power has a stronger effect than punishment power, although both are significant.

These results, while less central to our theoretical interests, help to validate our measures of fairness. Our findings show that subjects made clear distinctions between their perceptions of the fairness of the structure and the fairness of their partners' strategies. Further, they clearly and correctly judged differences in "objective" fairness between balanced and imbalanced structures, and between reciprocal and nonreciprocal strategies.

Table 6. Analysis of Variance of Subjects' Behavioral Reactions Toward POM

		Subjects' F	Rewards	Subjects' Pur	nishments	
Source	d.f.	Mean Sum of Squares	F	Mean Sum of Squares	F	
Between-Subjects Effects						
Reward power (RP)	2	3.70	87.56***	.04	5.38**	
Punishment power (PP)	2	.10	2.37	.02	2.93	
PO _M 's strategy (S)	1	4.18	98.91***	.14	17.05***	
$RP \times PP$	4	.04	.95	.00	.02	
$RP \times S$	2	.12	2.93	.01	1.33	
PP × S	2	.08 1.87		.00	.34	
$RP \times PP \times S$	4	.08	1.95	.01	1.51	
Within cells	162	.08 1.95 .01 .0401				
Within-Subject Effects of Trial						
Trial (T)	ī	.05	4.56*	.08	45.10***	
$RP \times T$	2	.13	11.96***	.00	.31	
$PP \times T$	2	.00	.15	.00	.68	
$S \times T$	1	.32	28.94***	.01	6.69**	
$RP \times PP \times T$	4	.01	1.09	.01	2.83*	
$RP \times S \times T$	2	.01	1.34	.00	.83	
$PP \times S \times T$	2	.01	.55	.00	.00	
$RP \times PP \times S \times T$	4	.01	.91	.00	1.44	
Within cells	162	.01	-	.00		

p < .05 p < .01 p < .001

Behavioral Reactions to Injustice

We first examine the overall effects of our manipulated variables on subjects' behavior before turning to an analysis of the direct and indirect effects of structure on behavior. Table 6 summarizes the results of an analysis of variance on subjects' rewarding and punishing actions toward PO_M. In order to examine not only the effects of structure and strategy on behavior, but also any changes in these effects over time, the 100-trial experimental session was divided into two 50-trial blocks, and trial block was treated as a within-subject variable in the analysis.

The results show that structure and strategy had only main effects on subjects' behavior toward PO_M, in contrast to their interaction effects on perceptions of fairness. The same variables affected subjects' rewarding and punishing: the structure of reward power and the strategy used by PO_M. As subjects' reward power increased, they punished more and rewarded less. PO_M's use of a punishment strategy pro-

voked more rewards and more punishment from subjects than did a reward strategy. The significant interactions of structure and strategy with trial block indicate that these effects change over time. Actors who are advantaged on reward power decrease the frequency of their rewarding; disadvantaged actors increase it. Changes in both rewarding and punishing vary by PO_M's strategy. The frequency of subjects' rewarding decreases in response to a reward strategy, but increases in response to a punishment strategy. The frequency of subjects' punishing decreases in response to both strategies, but the decline is much more marked for a punishment strategy. Together, these results suggest that a punishment strategy initially provokes more retaliation than a reward strategy, but that this retaliation decreases over time, while compliance increases. The findings also show an increasing advantage of structural reward power.

We next investigate the direct and indirect effects of structural power on behavior pre-

Table 7. Analysis of Covariance of the Effects of Structure and Fairness on Subjects' Behavioral Reactions Toward PO_M

		Sta	ructure Only	,	Fairne	ss as a Cova	riate
Source	d.f.	Mean Sum of Squares	F	Eta	Mean Sum of Squares	F	Eta
Dependent Variable: Subjec	ts' Rewards						
Perceived fairness	1		_	_	.87	45.43***	_
Reward power (RP)	2	1.85	87.56***	.62	1.01	52.95***	.50
Punishment power (PP)	2	.05	2.37	.10	.03	1.44	.08
Strategy (S)	1	2.09	98.91***	.46	2.61	136.76***	.56
$RP \times PP$	4	.02	.95	_	.02	.55	٠ —
$RP \times S$	2	.06	2.93*	_	.01	.60	_
$PP \times S$	2	.04	1.87	_	.03	1.54	_
$RP \times PP \times S$	4	.04	1.95	_	.04	1.90	_
Residual	161	.02	_	_	.02	-	_
Dependent Variable: Subjec	ts' Punishmen	ts					
Perceived fairness	1	_	_	_	.06	15.86***	_
Reward power (RP)	2	.02	5.38**	.23	.01	2.97°	.19
Punishment power (PP)	2	.01	2.93	.17	.01	2.57	.16
Strategy (S)	1	.07	17.05***	.29	.04	11.29***	.25
$RP \times PP$	4	.00	.02	_	.00	.02	_
$RP \times S$	2	.00	1.33	_	.00	.84	_
$PP \times S$	2	.00	.34	_	.00	.32	_
$RP \times PP \times S$	4	.01	1.51	_	.01	1.53	_
Residual	161	.00	_	_	.00	_	_

*p < .05 **p < .01 ***p < .001

dicted in Hypothesis 5. The strong support for the legitimation over the balance hypothesis implies that a structural power advantage should both directly and indirectly decrease subjects' rewarding and increase subjects' punishing behavior (Hypothesis 5b). Thus, the magnitude of the effects of structure on behavior should be greater when estimated before controlling for subjects' perceptions of fairness rather than after. If, instead, the indirect effect of structure opposed its direct effect (Hypothesis 5a), controlling for fairness would increase the effect of structure. To test these predictions, we compare the significance and eta coefficient for structural power before and after entering fairness as a covariate (Table 7).

The results for subjects' rewards to PO_M (the top half of Table 7) support the legitimation hypothesis (Hypothesis 5b) as expected. The perception of fairness has a strong positive ef-

fect on the frequency of subjects' rewarding,¹⁷ and controlling for fairness reduces the eta coefficient (but not the significance) for reward power. Separate analyses by strategy (not shown in Table 7) show that this effect primarily occurs when PO_M uses a punishment strategy.¹⁸ The effect of perceived fairness on sub-

¹⁷ Controlling for structure before estimating the effects of perception of fairness does not eliminate the significant effect of fairness on the frequency of subjects' rewarding actions.

¹⁸ Perception of fairness has no effect on subjects' rewarding actions when PO_M uses a reward-based strategy; thus, controlling for fairness has no effect on the eta for reward. When PO_M uses a punishment strategy, however, the effect of perception of fairness on subjects' rewarding actions is highly significant ($F_{1,80} = 145.33$, p < .001), and controlling for fairness reduces the eta for reward power from .70 to .39.

jects' punishing actions (the bottom half of Table 7), however, is much weaker than the effect of fairness on subjects' rewarding. Consequently, although controlling for fairness reduces the effects of power on subjects' punishing, the reductions are small.

DISCUSSION

Social exchange occurs within the context of the power relations among actors. In this paper, we have examined how that context affects actors' evaluations of the fairness of their partners' behavioral power strategies. Three main conclusions summarize our findings. First, to the extent that structural power affects the perceived fairness of a partner's power strategies, it does so by legitimating their use by the powerful, rather than justifying their use by the weak. Second, the process of legitimation is limited to an effect of reward power on the perception of punishment power strategies: Actors perceive their partners' punishment strategies as significantly more fair when their partners are advantaged on reward power than when they are disadvantaged. Third, we found no effect of structure on the perceived fairness of reward power strategies.

Support for the legitimation hypothesis over the balance hypothesis suggests that structural power does affect perceptions of behavior in ways that support and legitimate the use of punitive tactics by those in positions of advantage (e.g., verbal abuse by the wealthy patron or the popular teenager is tolerated and excused; the same behavior by their more dependent partners would not be). The effects on the perceived justice of punishment were dramatic: In relations imbalanced on reward power, perceptions of the fairness of a partner's punishment strategies varied from well below the midpoint on a bipolar scale when punishment was used by the disadvantaged partner, to significantly above the midpoint when used by the advantaged partner. Thus, the effect is not merely one of degrees of unfairness, as we expected, but a fundamental shift in the perception of patterns of behavior from unfair to fair.

While we predicted that structural power would have weaker effects on reward strategies, both because they are perceived as less intentional and because they provoke weaker affective responses, the absence of any effect is remarkable. PO_M's use of a reward power

strategy hurt a disadvantaged partner far more than it hurt an advantaged partner, who had attractive alternatives and benefited less from PO_M's reciprocity. Other studies have found that perceptions of justice are closely tied to an actor's self-interest (e.g., Hegtvedt 1990; Leventhal and Anderson 1970). Yet, our results show that actors who are disadvantaged on reward power perceived their partners' intermittent reciprocity as no more unfair than did advantaged actors.

The effect of reward power on the perception of punishment strategies has important implications for the use of these strategies in exchange relations. Because reward and punishment strategies represent different mechanisms for increasing advantage in exchange, they differentially benefit actors in different positions of reward power. Reward strategies, which decrease costs for the actors using them (because rewards are reciprocated only intermittently), are of most benefit to poweradvantaged actors, who are interested in their disadvantaged partner's rewards only if they can obtain them at low cost. Punishment strategies, which are designed to increase the partner's rewards (by punishing nonexchange), are more likely to be used by actors who are disadvantaged on reward power and who receive only infrequent benefits from the partners on whom they are most dependent (e.g., Molm 1989, 1990; Kanter 1977; Patterson 1982).

Thus, support for the legitimation hypothesis means that punishment is judged most unfair when used by the very actors who stand to gain the most from its use-actors who are disadvantaged on reward power. Furthermore, the perceived injustice of their behavior increases the risk of retaliation from their advantaged partners. Even though our results show that retaliation declines and compliance with punishment increases over time, real actors in highly dependent positions are unlikely to persist in punitive tactics with enough strength and perseverence to influence their powerful partners. These findings help to explain the low use of punishment found in previous experiments (e.g., Molm 1990): Structural power and norms of justice combine forces to reduce the use of punishment by the actors who could benefit the most from this power strategy. In doing so, they constrain the disadvantaged from using one of their only means of restoring equality in the relation.

Our finding that power-advantaged and power-disadvantaged actors perceive reward power strategies of which they are the targets as equally fair (or unfair) appears to conflict with the findings of a number of other studies (Stolte 1983; Steil 1983; Cook and Hegtvedt 1986; Cook et al. 1988). But two important differences distinguish our study from earlier work. First, in all of the previous work, subjects were evaluating behavioral inequalities that were themselves produced by the structure of unequal power. Support for legitimation, under those conditions, would require that actors in different structural positions, receiving different outcomes, perceive them as equally fair. Our study, by manipulating both structure and strategies, makes behavior independent of structure and examines how identical strategies are perceived by actors in different positions of structural power. This is a more sensitive test of the legitimating effects of power. It does not require that actors perceive unequal outcomes to be equally fair, but only that their structural position affects their perceptions of the same objective reality in a direction that favors the powerful.

Second, and most important for the different findings on the evaluations of reward strategies, previous studies have manipulated power by varying the number or availability of equally valuable alternatives; we manipulated power by varying the relative value of exchange and holding constant the number of alternatives. When power is manipulated by varying alternatives, holding the value of exchange within the relation constant, the use of power will produce unequal benefits within the relation. But when power is manipulated by varying value, holding alternatives constant, power use produces unequal benefits for actors within the network, but not necessarily within the relation. When a power-advantaged PO_M used the reward strategy in our experiment, that strategy produced fairly equal benefits for the subject and PO_M from each other, with PO_M giving twice as much value to the subject as the subject could give to PO_M (8 rather than 4 points), but only half as often (i.e., 40 percent of the time). Similarly, the tit-for-tat exchange between the subject and PO_C produced fairly equal benefits within that relation. Thus, the exchange within each relation appeared "fair," but the subject was disadvantaged in the network as a whole because PO_M could obtain the

subject's exchange at much lower opportunity cost, giving PO_M more time (hypothetically) to invest in exchange with an alternative partner who offered higher value.

In short, how dependence is created—by differential value or by differential alternatives or both—should affect perceptions of fairness. This is not merely a methodological point, but a theoretical issue with implications for the conditions under which power inequalities, and their resultant resource inequalities, will affect perceptions of fairness in relations. In natural settings, both value and alternatives are likely to vary. The potential value of exchange for two actors in a relation is rarely equal, and when it is not, the appearance of fairness within a relation can mask the injustice of the larger structure. Consider, for example, some of the popular justifications for the unequal distribution of household labor between husbands and wives on the grounds that: (1) women value clean houses and time spent with children more than men, and (2) men have greater opportunity costs because their jobs earn (on the average) more than their wives' jobs. Both husbands and wives may accept such logic-it is "fair" for the person who values a benefit more and who can produce it at lower cost to contribute more to its production—yet the end result is a system that produces lower outcomes for women overall, from both employment and the family.

These considerations, combined with our findings that both the structure and base of power affect judgments of fairness in interesting ways, suggest that much remains to be learned about the interactions among structure, behavior, and cognitions in exchange networks. While cognitions and norms were central to the classical exchange theories, contemporary research, stimulated by Emerson's (1972a, 1972b) pathbreaking work, has concentrated on developing the structural determinants of power and exchange. Increasingly, however, researchers are recognizing the need to bring other variables into the theory: strategies of actors, commitments to partners, affective ties, and normative constraints (Molm and Cook forthcoming). By moving in these directions, exchange theory is beginning to develop a conception of agency that can complement its well-developed analysis of structure.

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GENDER, LEGITIMATE AUTHORITY, AND LEADER-SUBORDINATE CONVERSATIONS*

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Gender differences in behavior in organizational settings are often attributed either to socialization processes or differential access to positions of authority. Conversation, an indicator of fundamental gender differences in behavior, is one area where this theoretical question of gender versus position can be addressed. In this paper, I systematically examine the effects of formal legitimate authority and gender socialization on conversational variables in the context of a relationship between parties of unequal status, I created a simulated organization in the laboratory to study conversations in four types of three-person organizational groups: (1) a female manager with female employees, (2) a female manager with male employees, (3) a male manager with male employees, and (4) a male manager with female employees. I examined both verbal and nonverbal behaviors. Because patterns of conversation may vary depending on the sex of the interactants and the norms of the group context, I also considered the effect of the sex composition of the group. Results of the analysis of verbal behaviors clearly indicate that formal authority is more important than gender in understanding conversation patterns, supporting the situational/authority explanation. Subordinates exhibit more conversational support (i.e., have higher rates of back channeling and positive interruptions, and talk less) than formal leaders and are less directive (i.e., have higher rates of qualifiers), regardless of sex. In contrast, sex composition of the group and gender have a complex effect on the two nonverbal behaviors, smiling and laughing, while formal position has little effect. Gender stereotyped expectations may be stronger for these nonverbal behaviors than for verbal behaviors in an authority context.

Browse through the "Psychology and Self-Help" section of your neighborhood bookstore and you learn that men and women have a difficult time understanding one another in conversation (e.g., Tannen 1990). The title of Gray's (1992) book, Men Are From Mars, Women Are From Venus, suggests an appealingly parsimonious explanation for the seeming impossibility of straightforward conversation between the sexes here on earth. Communication is a delicate process, and men and women often view each other as alien life

forms when they attempt to interact without benefit of an interpreter.

Empirical evidence suggests that although men and women use the same forms of talk in general, there are gender differences in the relative frequency of usage of these forms (O'Barr and Atkins 1980; O'Barr 1982; Lakoff 1990). For example, in conversations between men and women, either in informal task groups or in intimate relationships, men often speak and interrupt more, while women tend to ask a greater number of questions and to tag questions. Women also use qualifiers and disclaimers more often to soften their opinions and employ minimal responses that support other speakers (Zimmerman and West 1975; Aries 1976; Eakins and Eakins 1976; Hartman 1976; Fishman 1978; Octigan and Niederman 1979; West 1984; Mulac, Lundell, and Bradac 1986; Mulac, Wiemann, Widenmann, and Gibson 1988; Carli 1990). Gender differences in nonverbal behavior, such as smiling and laughing, are also well documented, with women smiling and laughing more often than men (Hall

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1984, 1985; Haas 1979; Ellyson, Dovidio, and Brown 1992; Leffler, Gillespie, and Conaty 1982).

A major theoretical question is: Why do these observable gender differences exist? Some authors offer a traditional socialization or subcultural approach to explain gender differences, contending that women and men learn to talk in different ways as girls and boys and then carry their respective styles into adulthood (Maltz and Borker 1982; Tannen 1990). Others suggest a structural/situational explanation, arguing that differences in verbal and nonverbal behavior mirror the overall differences in power between men and women in the larger social structure (Thorne and Henley 1975; Thorne, Kramarae, and Henley 1983; Fishman 1978; Lakoff 1975, 1990; O'Barr 1982; O'Barr and Atkins 1980). Although Kanter's (1977) work on power, gender, and leadership in organizations did not specifically address the study of conversation, it did suggest that gender differences in behavior are due to structural power differences rather than to socialized attributes.

Kollock, Blumstein, and Schwartz (1985) wrestled with the question: What is the relationship between gender and power and the observed differences between men's and women's speech? They examined conversations between intimate partners in straight, gay male, and lesbian relationships. In their study, the effects of power and gender varied independently, allowing for separate analyses of their effects. The more powerful partner was defined as the one who had more influence in decision-making relative to the other. Results indicated that, in the three types of couples, the more powerful partner demonstrated a higher rate of interrupting than the less powerful partner, regardless of gender. Further, in straight and lesbian couples, the less powerful partner had a higher rate of "back channels" than the more powerful partner. Talking time and questioning, however, seemed linked to both power and gender, though not in a simple way.

In this paper, I extend previous work and current theoretical explanations of the effects of gender and power on conversational behavior between men and women in three ways. While focusing on gender, I study the effects of formal legitimate authority—a type of power associated with occupying a formal position in an organization and the resources and

status that come with it—on conversational behavior. Based on Weber (1978) and Zelditch and Walker (1984), I define legitimate authority as the right to dictate another's compliance within the scope of that authority. It is the obligation of subordinates to obey the authority regardless of their personal preference. 1 I examine conversations in authority relationships between formal leaders (male and female) and their subordinates (male and female) embedded in an organizational setting, a fairly new context for research on gender and language. Naturalistic studies of conversation, although critical to our understanding of conversation, implicitly use designs which do not allow us to separate the effects of gender from authority. The experimental design used here provides a way to unequivocally measure legitimate authority independent of other characteristics, allowing us to examine whether gender has conversational effects that are independent of structural position.

I also examine verbal and nonverbal behaviors, since there is evidence to suggest that gender and authority have differing effects on these behaviors (Dovidio, Brown, Heltman, Ellyson, and Keating 1988; Aries 1982). Some nonverbal behaviors (e.g., smiling and laughing) may be associated more with gender stereotypical behavior, regardless of formal authority, because these nonverbal behaviors are more difficult to control than spoken conversation (Goffman 1959; Aries 1982).

Finally, I analyze the effect of the sex composition of the group, a complex contextual variable that has been neglected in most previous studies on individual behavior. Smith-Lovin and Brody (1989) alerted us to take sex composition of groups into account when examining conversations. They found, for example, that men direct more attempts at supportive interruption toward other men in allmale groups than toward men in mixed-sex groups. As the proportion of women in the group increases, the odds of a man interrupting another man in a supportive way declines

¹ As do Weber (1978) and French and Raven (1959), I regard legitimate authority as one type or base of power. Authority includes the right to allocate tasks, direct performance, set criteria, inspect and evaluate performance, and allocate sanctions based on performance (Dornbusch and Scott 1975; Zelditch and Walker 1984).

steeply. In addition, other research shows that women tend to be most social and expressive in interaction with other women, and men the least so in interaction with other men. In mixed-sex groups, both men and women behave more like members of the other sex (Carli 1989: Piliavin and Martin 1978: Aries 1976). This same pattern has also been found in studies of nonverbal behaviors, such as smiling and touching (Hall 1984). Hall (1984) and Carli (1989; 1990) argued that different norms operate in same-sex interactions than in mixed-sex interactions. They viewed the gender difference in socioemotional orientation as a function of expectancies and norms that depend, in part, on the sex composition of the group, not on gendered differences in personality (Carli 1990:943). Conversation, then, is an interactive process, the patterns of which may vary depending on the characteristics of the interactants and the norms of the group context.

BACKGROUND THEORY

As proposed by Maltz and Borker (1982), the sociolinguistic subculture approach argues that boys and girls grow up in essentially different talk subcultures, resulting from the differing expectations parents and peers direct toward them about acceptable ways to talk. For example, boys learn that it is appropriate to tell jokes and give orders while girls learn to use more polite and emotion-laden talk. Maltz and Borker contended that adults learn their ways of speaking as children in sex-segregated peer groups (see also Thorne and Luria 1986). Consequently, communication between men and women as adults is considered cross-cultural. There are cultural differences between men and women regarding the rules governing conversation and the interpretation of these rules.

The sociolinguistic subculture approach suggests, then, that men and women exhibit distinctly different speech patterns in conversation, regardless of context (e.g., informal committees, work groups, and intimate relationships). In contrast, the *situational/authority approach* emphasizes the effect of authority on speech and behavior, rather than the effect of differences in childhood socialization.² It ar-

gues that patterns of speech used by women are both a reflection and a cause of their inferior social position (Fishman 1978; Kanter 1977; Lakoff 1975, 1990; O'Barr 1982; Zimmerman and West 1975). Gender differences in verbal interaction are then, in large part, a manifestation of the hierarchical relations among men and women.

One can see the interactional manifestation of power relations, according to this approach, in the greater amount of conversational work women do than men. Women nurture conversation to keep it going by obeying the rules of polite interaction, while men more often dominate the conversation and violate the rules of turn-taking without repercussion (Fishman 1978; Kollock et al. 1985).³

The implication of this situational/authority approach is that because women's speech is in part a "language of the powerless," women who are in powerful positions will talk more "like men," reflecting their dominance. Similarly, men in subservient positions will exhibit behaviors that reflect their lack of power and talk more "like women" (O'Barr 1982; O'Barr and Atkins 1980).⁴

The form of power studied in this research is legitimate authority. Although an individual in a position, the position itself, and the system of positions can all be "legitimated" (Walker, Thomas, and Zelditch 1986), I focus in this study on the legitimacy of the individual in a

in this culture are socialized in a context where men have more power politically, economically, and socially (Lakoff 1990; Ochs 1992). The two arguments, however, emphasize different explanations of conversational behavior—gender socialization as opposed to situational authority processes.

³ In support of this approach, O'Barr and colleagues, in their study of language variation among witnesses in courtroom settings, found that an individual's social position within the larger society may be a better predictor of talk patterns than is their gender (O'Barr 1982; O'Barr and Atkins 1980).

⁴ This argument rests on assumptions of a model of turn-taking derived from the work of Sacks, Schegloff, and Jefferson (1974) and Zimmerman and West (1975). This model conceptualizes conversation as a process of turn-taking wherein conversation is organized to ensure that one speaker talks at a time and that change of speaker occurs. The conversation parties are aware of these turn-taking rules, and further, share the same meaning of these rules.

² I do not claim that these two approaches are mutually exclusive. Men (boys) and women (girls)

position—that is, whether or not that individual is perceived as the right or proper person for the position by those in subordinate positions. Although an individual may occupy a superordinate position, this does not automatically ensure his or her legitimacy.

Legitimate authority involves two dimensions: the procedure used to allocate a person to office and the qualifications of that person for the office (Read 1974). Previous studies on leadership show that individuals in leadership positions have the greatest legitimacy when their appointments are based on qualifications or expertise (past achievements) and are allocated by someone from the top of the authority structure. Their legitimacy, in turn, affects subsequent leader-subordinate interaction (Burke 1968; Read 1974). This is especially true for female leaders and their subordinates (Eskilson and Wiley 1976).

Two aspects of formal legitimate authority affect leader-subordinate interaction. First, formal leaders and subordinates have certain role requirements that guide the nature of their interaction (Eagly 1987). For example, leaders are more likely to direct the topics of discussion. Second, as discussed above, individuals have legitimate status in their positions when they are perceived to have the qualifications and expertise and when their position was allocated from the top of the authority structure. Legitimate authority, then, according to the situational/authority approach, should attenuate any gender differences in conversation patterns. According to this approach, legitimated formal leaders, regardless of gender, are likely to use more dominant speech patterns than their subordinates; subordinates are likely to use more supportive and less directive speech, regardless of gender.

VARIABLES AND PREDICTIONS

I examine the effects of legitimate authority, gender, and sex composition of groups on eight dependent variables that describe different aspects of conversation: time talked, interruptions, overlaps, back channels, disclaimers, qualifiers, smiling, and laughing. I chose these variables on the basis of their importance in the literature and because of their relevance to the gender/power debate.

Regarding the time talked the situational/authority approach predicts that individuals in high-authority positions will talk *more* than those in low-authority positions, regardless of gender (Lakoff 1990). The subculture approach predicts that gender will have an effect where men will talk more than women, regardless of position.

Interruption is one of the most frequently studied conversational variables, and much theorizing has stemmed from its analysis. Typically, the interruption is considered a control device used to usurp another's right to speak and is defined as a deep intrusion into another's speech turn (Zimmerman and West 1975:114). Interruptions are interpreted as rule-breaking behavior-violations of the interactional order of turn-taking (Zimmerman and West 1975; Kollock et al. 1985). Murray (1987) and Smith-Lovin and Brody (1989) have suggested that, in addition to signaling dominance, interruptions may sometimes evidence cooperation. Further, Tannen (1983, 1990) has argued that interruptions are not necessarily intended as a control device, but rather as a signal of interest in the other's speech.

Assuming that not all interruptions have the same intent or the same effect in conversation. a more complex argument must be made in comparing the situational/authority and subculture approaches. The situational/authority approach would posit that interrupting to change the topic or to disagree with the speaker is the exclusive right of individuals in high-authority positions. Members in low-authority positions, however, may interrupt those in high-authority positions more often when the interruptions signal cooperation or interest. In contrast, the subculture approach would argue that women will do more cooperative interrupting than men, since they have learned to be more supportive, show interest, and pay greater attention to the speaker. Men, however, will use more negative types of interruptions than women, since they have learned that this is an acceptable form of behavior.

Overlaps, which are instances of simultaneous speech occurring very close to a possible transition from one speaker to another, have had a history of inconclusive empirical findings. Zimmerman and West (1975) found that men overlap women more than women overlap men and concluded that overlaps are similar to interruptions as a means of asserting dominance. Kollock et al. (1985), however, found no gender or power differences in rates

of overlaps in straight couples. Overlaps may be an example of a behavior that is not affected by either gender or formal authority (Lakoff 1990).

Back channels are minimal responses that signal the listener's encouragement and support, such as "yeah," "mm-hmm," and "right" (Kollock et al. 1985:39). The situational/authority approach suggests that back channels occur in the speech of those with less authority, regardless of gender, signaling deference toward those in high-authority positions (Thorne and Henley 1975; Fishman 1978; Kollock et al. 1985). In contrast, the subculture approach argues that back channels may be a reflection of women's greater learned expressiveness, sociability, and showing of interest (Maltz and Borker 1982; Carli 1990).

Disclaimers are statements usually expressed directly before an opinion or idea that signal a minimal commitment of the speaker to the expressed idea. They also indicate the speaker's uncertainty concerning others' responses to an expressed idea, e.g., "I may be wrong but," "I don't know but," "I know this sounds stupid but," are all disclaimers (Hewitt and Stokes 1975; Pearson 1985; Carli 1990). Closely related to disclaimers are qualifiers (also referred to as hedges), which are adverbs (e.g., "maybe," "perhaps," "sort of") that tend to weaken the strength of the statement presented. Most often, disclaimers and qualifiers are considered to be less directive speech evoked by those with less power in a situation (Lakoff 1990).

The subculture approach predicts that, since the nonverbal behaviors of *smiling* and *laughing* are more acceptable for girls than for boys, women will smile and laugh more in conversation. The situational/authority approach argues that smiling and laughing signal deference and/or politeness of subordinates in an authority context and predicts that smiling and laughing will be associated with low authority and will not be gender-related.

Given the above considerations, the predictions are as follows: According to the subculture approach, men will be more dominant in conversation (i.e., talk more and have higher rates of neutral and negative interruptions) than women, regardless of position. Further, men will be less supportive (i.e., have lower rates of positive interruptions, back channels) and more directive (i.e., have lower rates of dis-

claimers and qualifiers). They will also smile and laugh less in conversation, regardless of position.

In contrast, the situational/authority approach predicts that formal leaders, regardless of gender, will talk more than subordinates and have higher rates of neutral and negative interruptions. Further, leaders will have lower rates of positive interruptions, back channels, disclaimers, qualifiers, smiles, and laughs than subordinates, regardless of gender.

In addition, the situational/authority approach predicts that the sex composition of the group will not have an effect on the dependent variables when leaders are legitimated by the group. Formal authority should wipe out any effect of group sex composition. The subculture approach, although not explicit on the matter, predicts that women in same-sex groups will use more supportive language (as learned in their peer groups) than men in same-sex groups, who will be more dominant. This approach, however, makes no predictions about the comparison between same-sex and mixedsex interaction because it does not focus on mixed-sex peer group interaction. Based on previous research (Carli 1989, 1990; Hall 1984; Piliavin and Martin 1978; Aries 1976), we predict that women in all-female groups will tend to engage less in dominant behavior and more in supportive behavior than women in mixed-sex groups. Men in all-male groups will tend to be more dominant and less supportive than men in mixed-sex groups.

METHODS

Participants and Organizational Groups

To analyze the effects of gender, formal authority, and sex composition of the group on conversation patterns in a setting where gender and formal authority vary independently, I created an experimental situation using a 2 × 2 factorial design. The sex of the superordinate was crossed with the sex of the subordinate to create four types of three-person organizational groups: (1) a female manager with two female employees; (2) a female manager with two male employees; (3) a male manager with two male employees; and (4) a male manager with two female employees. This design also allowed for the comparison of conversation between same-sex and mixed-sex groups.

A simulated organization was designed to replicate closely an office working group. Each organizational group consisted of a manager and two same-sex employees. Two subordinates were used in each group instead of one because, more often than not, managers in organizational settings have more than one subordinate to supervise. Formal authority was manipulated by differentiating the superordinate and subordinates on several characteristics of formal position. The manager: (1) received higher pay (the manager received \$6 and each subordinate received \$4), (2) performed complex decision-making tasks while the employees performed mundane tasks, (3) had access to information not given to the employees, (4) directed the employees on a variety of tasks, (5) inspected employees' performance; and (6) had an office decorated to reflect higher status.

One hundred forty-one paid undergraduate volunteers (71 females and 70 males between the ages of 18 and 21) were recruited from introductory sociology classes to participate in the experiment. They were strangers to one another. They were randomly assigned to one of the four types of three-person organizational groups, yielding 47 groups. Four groups were excluded from the final analysis because postexperimental interviews indicated that one or more members did not take the study seriously; two were excluded because a subject was a minority member; and one group was excluded because of equipment failure.5 The final analysis included 40 groups (120 individuals) with 10 groups of each type.

Procedures

Two offices of a retail video store, a manager's office and an employees' office, were created in the laboratory. In an informational summary subjects were told that they would be asked to role-play in a simulated organizational context. The organization, called Videomasters, Inc.,

was described as a retail video store that rents videos and sells board and computer games. It had been in operation for a year and eight months and was owned by a parent corporation.

To ensure legitimacy of the individuals in the managerial positions, all subjects were told by the experimenter that role assignments were based on the work experience of participants, as listed in their employment histories. Employment history forms asked subjects to list the two paying jobs they had performed in which they had held the greatest responsibility (based on job title, duties performed, pay, etc.). This procedure drew upon cultural assumptions which presume that those who have more responsibility on the job are more qualified to manage others. In reality, however, subjects were randomly assigned to positions.

Subjects were then led into their respective offices and given a brief history of the organization, their job descriptions, and role-playing instructions. The manager's office had wooden bookshelves with a glass case, a comfortable chair and desk, a computer, a filing cabinet, pictures on the wall, and dried flowers. In contrast, the employees' office was noticeably stark, with only a table, two basic chairs, some boxes, and a metal bookcase.

Employees performed a variety of lowskilled, repetitive tasks as directed by the manager, including inserting sales flyers into envelopes and addressing them to customers on a mailing list, alphabetizing cards with the names of video club members, and making sales signs for the store window. In contrast, the manager engaged in more complex decision-making tasks, including instructing the employees in their work, inspecting employee performance, reviewing profit information and computer game and video inventories, and choosing which computer/board games and videos to order for the following month. This phase of the role-play lasted one-half hour and established the subjects in their roles and context.

The manager was instructed to ask the employees into his or her office after they completed their tasks, to discuss two problems the store was having. To prepare for this phase, the manager was given the following problematic scenarios. The first problem was:

About a week ago, while you were in the store, you noticed that a 14-year-old boy had just placed a board game under his coat and was starting to

⁵ Groups with a minority member were excluded from the analysis for theoretical reasons. Race and ethnicity may act as a confounding variable, making interpretation of the effects of gender and formal authority on conversation patterns difficult. A subjects' seriousness was determined by responses to several questions on a questionnaire administered after the group discussion and to questions asked during the debriefing.

walk out the door. You were not sure what you should do, so you stopped the boy and told him to give back the board game. The boy looked frightened and ran out of the store with the board game. You were not sure how to handle the situation. You decided that it was too late to do anything about it at this time. However, because of this incident, you realized that the store needs a set of procedures outlining how you and your employees should handle shoplifters in case this happens in the future.

The second problem was:

You are fully aware that the video business is highly competitive here in (name of city). You are also aware that the store's profit margin has only slightly increased over the last eight months. Therefore, you have become increasingly concerned with how to attract new customers to the store.

The manager was informed that it was his or her responsibility to come up with high-quality solutions to these two problems and that he or she should take into account the employees' opinions in the discussion. To increase motivation to do well, the manager was also told that various possible solutions to these typical problems had been rated as poor, fair, good, and excellent based on actual solutions adopted by professional business people. Ostensibly, the solutions that the manager adopted would be evaluated by these standards. In reality, however, the manager's solutions were never evaluated. Subordinates had been informed at the outset of the role-play that they would be asked into the manager's office later in the study to discuss several problems the store was facing. They were given no other information. Discussions lasted from 8 to 10 minutes and were videotaped.

The videotaped conversations from each experimental condition were divided randomly between two transcribers, one male and one female, for transcribing and coding.⁶ To measure intercoder reliability five randomly chosen groups were transcribed by both coders.

Intercoder correlations for manager and subordinate categories ranged between .73 and .99.7

Measures of Dependent Variables

Data on the following items for managers and subordinates were gathered as described below from typed transcripts of the videotaped discussions:

Time talked. Total number of seconds spent talking was measured for each participant.

Interruptions. Three categories of interruptions were coded using Smith-Lovin and Brody's (1989) coding scheme which adequately captures the affective character of interruptions. A positive interruption was coded if "... it expressed agreement with the speaker, if it made an affectively positive request for elaboration, or if it completed the speaker's thought" (p. 428). A negative interruption was coded if ". . . it expressed disagreement with the speaker, raised an objection to the speaker's idea, or introduced a complete change of topic" (p. 428). Neutral interruptions included ones that "... were too short to determine content, elaborated on the topic of the interrupted speaker without evaluating the content, or requested elaboration" (p. 428).

These three types of interruptions were further coded as either successful or unsuccessful. In a successful interruption, the interrupted speaker ceded the floor and allowed the interrupter to continue his/her speech act. In an unsuccessful interruption, the interrupted speaker held the floor and continued to talk, despite the attempt of the second speaker to interrupt. An example of a neutral unsuccessful interruption follows:

Mgr.: Okay, what we didn't talk about is we could get a surveillance camera. Do you think that's necessary for

⁶ The two transcribers completed 12 hours of training to assure consistency in transcribing the behaviors of the role-playing participants (e.g., interruptions, overlaps, and back channels). We used a notation scheme similar to, but not as detailed as, schemes used in similar studies. For example, // represents an interruption, [] represents an overlap, and (()) represents the transcriber's descriptions of nonverbal behavior. The discussions were transcribed verbatim.

⁷ The intercoder correlations for manager categories are as follows: time talked, r = .94; interruptions, r = .95; overlaps, r = .89; back channels, r = .82; disclaimers, r = .91; qualifiers, r = .98; smiles, r = .73; and laughs, r = .92. Correlations for subordinate categories are: time talked for first subordinate, r = .99; time talked for second subordinate, r = .90; interruptions of manager, r = .86; overlaps, r = .97; back channels toward manager, r = .95; disclaimers, r = .99; qualifiers, r = .91; smiles, r = .85; laughs, r = .99.

the store or you think that// for now we should the it depends on

Mgr.: try to keep an eye on people?

An example of a positive unsuccessful interruption is:

Mgr.: What do you think about, um, possibly like, a new sign for the store as opposed to just drawing things in the window. I don't know, something // that will catch more I think, yeah like

Mgr.: attention.

Overlaps. The number of overlaps was counted for each participant. For example:

A good _ idea too is like
um they have those programs
that are like if you buy so
many movies you know maybe
you get a card like and you
punch it each time and like
after say you know ten movies you might get one free.

Back channels. The number of back channels was counted for each participant. For example:

Mgr.: So maybe we could like specifically do stuff with the Star Trek I mean

Empl.#1: mmm hmm

Mgr.: play off that and also get some um, interest in these

other games tolo.

Empl.#1:

Disclaimers. The number of disclaimers was counted for each participant. For example:

mmm hmm

Mgr.: Do you think, (I mean, I don't know), I think that if we caught somebody shoplifting if we say something to them, they'd probably be scared enough.

Qualifiers. The number of qualifiers was counted for each participant. For example:

Empl.#2: (Maybe) run certain deals
 on certain nights so many
 for I don't know I don't
 know what the regular price
 is but (maybe) three for

not what three would regularly cost.

Smiles/laughs. The number of smiles and number of laughs were counted for each participant.⁸

Mgr.: I mean ((laughs, looks at E1)) if they, if they're young, or what ((looks at E2))

Empl.#2: mm hmm ((smiles))

Mar.: what do you think?

Counts for each variable were converted to rates per minute as follows: For each participant, the frequency of occurrence for each verbal behavior (interruptions, overlaps, back channels, disclaimers, and qualifiers) was divided by length of time that participant talked (measured in seconds), and multiplied by 60 to represent a rate of behavior per minute. Frequency of manager's and subordinates' nonverbal behavior (smiling and laughing) was divided by the length of the discussion (time in seconds divided by 60), representing a rate of behavior per minute. The amount of time talked was measured by total time in seconds for the manager and the two subordinates.

RESULTS

Analysis was complicated by the fact that the actions of individuals within groups are not independent; there may be an effect of being in a particular group. For example, in a group with an overly dominant manager, the subordinates are more likely to be low participators. Thus, I report three separate analyses. The first analysis tests the effects of gender, formal position, and sex composition of the group on the conversation variables using multiple regression and pays no attention to group effects. The second analysis takes group effects into account by adding dummies for each group in place of the sex composition variables; having both group and sex composition in the same model would be redundant. The third analysis was an analysis of variance to clarify the results of the first two analyses.

⁸ Tag questions were also coded, but they rarely occurred. They are defined as, "... a hybrid between a question and an outright statement." Tag questions are considered as a way of avoiding making strong statements (Kollock et al., 1985:36), for example, "I think that would work, don't you?"

Table 1.	Unstandardized Coefficients for the	e Regression of Verbal and	i Nonverbal Ca	ategories on Position,	Gender,
	and Sex Composition of the Group)			

Independent	Time Talked	Interruptions		Rev	Back	Back Dis-				
Variable		Total	Positive	Neutral	Overlaps			Qualifiers	Smiles	Laughs
Constant	84.413 (11.740)	2.049 (.299)	1.279 (.227)	.635 (.150)	.638 (.183)	3.112 (.596)	1.208	6.767 (.802)	.432 (.059)	.451 (.072)
Position	186.86*** (11.740)	690** (.299)	585** (.227)	132 (.150)	379* (.183)	-1.595** (.596)	155 (.252)	-2.696*** (.802)	.009 (.059)	.123 (.072)
Gender	31.450 (16.603)	276 (.424)	478 (.322)	.169 (.23)	069 (.259)	900 (.843)	231 (.356)	.569 (1.135)	.187* (.084)	166 (.101)
Sex Compositio	o n									
All-male	-19.517 (22.819)	348 (.582)	.252 (.442)	471 (.292)	011 (.356)	.688 (1.159)	.347 (.489)	~.936 (1.560)	488*** (.115)	225 (.139)
Mixed with male managers	-8.617 (16.603)	285 (.424)	.133 (.322)	316 (.213)	.012 (.259)	.562 (.843)	.024 (.356)	.294 (1.135)	~.122 (.084)	.003 (.101)
Mixed with female managers	-24.867 (19.172)	381 (.490)	079 (.371)	144 (.245)	049 (.299)	165 (.973)	.463 (.411)	.315 (1.310)	117 (.097)	010 (.117)
Total R ²	.68	.07	.09	.04	.04	.08	.02	.10	.18	.18
F	51.608***	1.744	2.220**	.996	.920	2.022*	.435	2.522**	5.048***	5.114***

*p < .05 **p < .01 (two-tailed tests for unstandardized coefficients)

Note: Numbers in parentheses are standard errors. Omitted category is "all-female." N = 120.

First Analysis: Position, Gender, and Sex Composition

In this analysis, position was coded 1 for manager and 0 for subordinate; gender was coded 1 for male and 0 for female. The three dummy variables used for sex composition were allmale, mixed group with male managers, and mixed group with female managers. The allfemale group was the excluded category.

To test for the effects of position, gender, and group sex composition on each dependent variable, I began with the simple additive model reported for each of the ten dependent variables in Table 1. In analyses not shown, I also tested interactions among the independent variables, the most theoretically important of which is between position and gender, which tells us if there is any additional effect of being male and a manager over and above the sum of the effects of being male and being a manager. None of the interactions was significant.

Verbal behaviors. As predicted by the situational/authority approach, position has the strongest effect on a majority of the verbal behaviors, while neither gender nor sex composition has any significant effect on any verbal behaviors (columns 1 through 8 in Table 1). Managers talk more. They have lower rates of positive interruptions, back channels, and qualifiers than subordinates, regardless of their own gender, their subordinates' gender, or the sex composition of the group. Formal leaders use less tentative and less supportive language and dominate the floor more than subordinates.

Neither position, gender, nor group type affects a few outcomes. Both manager and subordinates, regardless of gender and group type, have similar rates of disclaimers and neutral interruptions. Contrary to Zimmerman and West's research on interruptions, recent studies of informal task groups (Smith-Lovin and Brody 1989; Carli 1990) found that men and women did not differ in their rates of interrupting. The present findings also support the contention that the meaning of interruptions in a particular context depends on both the situation and the content of the interruptions (Heri-

⁹ Successful and unsuccessful interruptions were also analyzed. Results showed that subordinates have higher rates of both successful (p < .01) and unsuccessful interruptions (p = .05) than managers, controlling for gender and sex composition of the group.

tage 1984; Murray 1987; Smith-Lovin and Brody 1989; and Tannen 1990). Looking at the context of interaction in this study, the managers were instructed to take into account the opinions of their subordinates, creating a more democratic rather than an autocratic atmosphere. A free exchange of ideas and input from the subordinates was encouraged. Similar to Smith-Lovin and Brody's (1989) study on interruptions, negative (successful and unsuccessful) interruptions by both managers and subordinates rarely occurred in the groups; because managers had legitimate authority, there was no apparent struggle to usurp authority by subordinates. This may be one reason for the high rate of positive interruptions by subordinates and managers relative to neutral and negative interruptions.

Position has an effect on overlaps; managers have *lower* rates of overlaps than subordinates. This result calls into question the interpretation of overlaps as a form of dominance. Overlaps, in this context, may signal cooperation, interest, or an eagerness to help in the conversation, similar to positive interruptions. This is only a tentative interpretation since there is, at present, no theoretical basis for interpreting overlaps.

Nonverbal behaviors. The last two columns of Table 1 show the effects of position, gender, and sex composition of the groups on smiling and laughing. In contrast to verbal behavior patterns, sex composition of the group and gender clearly affect smiling, if not laughing, while position has little effect. Leffler et al. (1982) and Dovidio et al. (1988) also found no effect of power on laughing and smiling. Individuals in all-male groups are likely to have lower rates of smiling than individuals in allfemale groups. Curiously, however, gender has the opposite effect on smiles than predicted; males tend to smile more often than females. This is odd, given the high rate of smiling going on in all-female compared to all-male groups. Male managers with female subordinates and/or male subordinates with female managers both have high rates of smiling, indicating that men may smile more often when interacting with women than with other men.

Second Analysis: Position, Gender, and Groups

Since individuals are nested within particular groups, I added 39 (40 minus 1) dummy vari-

ables to the model, one for each specific group. Group 40, a group with a female manager and male subordinates, was the excluded group. Position and gender were coded the same as in the initial analysis. However, sex composition was not included in these models. My particular concern was to see whether position and gender have effects consistent with the previous analysis, independent of particular group effects (tables available upon request).

Verbal behaviors. The effects of position and gender on verbal behavior rates are very close to the results in the first analysis for each verbal behavior; being in a particular group has no systematic effect on the findings. Managers talked more ($\beta = 186.86$, p < .001); subordinates had higher rates of positive interruptions ($\beta = -.585$, p < .01), back channels ($\beta = -1.59$, p < .01), qualifiers ($\beta = -2.70$, p < .001), and overlaps ($\beta = -.379$, p < .05). Position and gender had no effect on neutral interruptions and disclaimers.

Nonverbal behaviors. The effect of gender on smiling and laughing is in the same direction as in the first analysis, but it is slightly stronger for both variables in the models with group dummies. Men have higher rates of smiling than women ($\beta = .187$, p < .01), and women have higher rates of laughing ($\beta = -.165$, p = .05). As in the first analysis, position has no effect on smiling. It has a slightly stronger effect, however, on laughing in this model ($\beta = .124$, p = .05).

Results from both the first and second analyses consistently show that position has a much stronger effect than gender on the verbal behaviors; the second analysis confirms that the findings in the first analysis are robust. Results on the nonverbal behaviors from both analyses suggest that gender and sex composition seem to be important for smiling and laughing, while position has some effect on laughing. ¹⁰ Exactly

¹⁰ To further check for any problems created by effects of particular groups, I estimated "error components" (EC) models of the equations of Table 1, using the Fuller-Battese implementation of EC available through SAS5 (SAS 1986). The procedure decomposes equation errors into between-group, within-group, and residual (or left-over) orthogonal, additive components. It allows and adjusts for a single within-group correlation of errors (across manager and "subordinate 1," manager and "subordinate 2," and the two subordinates) and a constant between group correlation (Kmenta 1988). Allow-

Table 2. Means and Analysis of Variance of Manager and Subordinate Nonverbal Behavior

Nonverbal Behavior	Condition Means				ANOVA Results (F)		
	Male Manager		Female Manager		***************************************		Gender of
	Male Subordinates (N = 10)	Female Subordinates (N = 10)	Male Subordinates (N = 10)	Female Subordinates (N = 10)	Gender of Manager	Gender of Subordinates	Manager × Gender of Subordinates
Smiles							
Manager	.126	.558	.375	.354	.048	4.011	4.894*
Subordinates	.139	.285	.477	.476	10.824**	.811	.832
Laughs							
Manager	.096	.409	.562	.671	9.088**	3.046	.714
Subordinate	.105	.456	.278	.404	.364	5.707°	1.275

p < .05 p < .01

Note: Frequency of manager behavior was divided by length of the discussion (time in seconds divided by 60). For each subordinate, the frequency of behavior was divided by the length of discussion (time in seconds divided by 60). The resulting scores of each subordinate were averaged to create the dependent variable.

how these variables affect the nonverbal behaviors, however, is not clear-cut from either analysis.

Third Analysis: Analysis of Variance for the Nonverbal Behaviors

I conducted an analysis of variance to shed light on exactly how gender, sex composition, and position affect smiling and laughing in these groups. Several results support the subcultural theory. First, as shown in Table 2, the difference in rates of smiling and laughing by managers and subordinates in all-male groups, relative to all-female groups is quite strong: Women in all female groups have higher rates of smiling and laughing than men in all-male groups. Second, female managers tend to laugh significantly more than male managers, regardless of the sex of their subordinates (p < .01). Further, female subordinates, regardless of the sex of the

ance for such non-zero covariance among errors (or "error structure") yields parameter estimates (and test statistics) for substantive variables that are virtually identical to analogous parameter estimates in the OLS estimations of Table 1. This indicates that departures from within- and between-group independence of errors (under the EC model) are of trivial importance for substantively interesting estimates and test results.

Specifically, for the verbal behaviors, the results were identical to the other two approaches (same β values and significance levels). Similar to the sec-

manager (p < .05). Typically, then, laughing, is done more often by women than men.

If subcultural theory is accurate in its explanation of gender differences in smiling and laughing, however, we would expect a clear gender effect for both. This is not the case here. In fact, gender actually has an opposite effect on smiling than predicted by the theory, and sex composition of the group seems to be a better predictor than gender for these nonverbal behaviors. Why is this so? The answer lies in the mixed groups. Males in same-sex groups don't smile with each other very often, but males in mixed-sex groups smile quite a bit. In fact, male managers with female subordinates have the highest rate of smiling (.558). Male subordinates with female managers have the second highest rate (.477), very similar to the rate of female subordinates with female managers (.476). Further, female subordinates tend to smile less with male managers, while male subordinates smile more with female managers (p < .01).

ond analysis with dummies for each group, gender had a stronger effect on smiling and laughing than in the initial analysis ($\beta = .188$, p < .01; $\beta = -.166$, p = .05), and position had no effect on smiling, but a stronger effect on laughing ($\beta = .124$, p < .05). Similar to the initial analysis, the results showed that individuals in all-male groups are likely to have lower rates of smiling than individuals in all-female groups ($\beta = -3.96$, p < .001). These findings also confirm that the results in the analysis are robust.

In all situations, females are more likely to laugh, but males are more likely to laugh in mixed than same-sex groups. Male managers laugh more with female (.409) than with male subordinates (.126). Male subordinates laugh more with female (.278) than with male managers (.105). Importantly, male managers discriminate more between male and female subordinates in their use of smiles and laughs than do female managers. This same pattern is evident for male subordinates. Smith-Lovin and Brody (1989) also found that men discriminate more between men and women in their use of interruptions than do women.

DISCUSSION

In this study, I systematically examined the effects of formal legitimate authority and gender on conversational variables to see if authority attenuates gender effects on speech patterns. Evidence on verbal behavior clearly supports the situational/authority approach suggesting that, in line with Kollock et al.'s (1985) and O'Barr's (1982) studies, authority is more important than gender in understanding conversational patterns. Formal legitimate authority severely attenuates the effect of gender in these groups. Subordinates are more supportive and less directive (i.e., talk less and have higher rates of positive interruptions, back channels, and qualifiers) in their speech than formal leaders.

It is striking that, even though formal authority was only weakly manipulated in this study, position still has the strongest effect on the verbal behaviors. Recall that formal authority includes rights to allocate tasks, direct performance, set criteria, inspect and evaluate performance, and allocate sanctions based on performance. In this study, managers had the right to allocate tasks, direct performance, and check performance, but they did not evaluate performance or allocate sanctions based on performance. Therefore, this is a weak test of formal authority; yet position still has a strong effect compared to gender and sex composition of the group on the verbal conversation variables.

In contrast to the results on the verbal behaviors, the sex composition of the group and gender of participants have a complex effect on the two nonverbal behaviors, smiling and laughing, while position has only a marginal effect on laughing. Men in same-sex groups

have significantly lower rates of both smiling and laughing than women in same-sex groups. Female managers and subordinates have the highest rates of laughing in same and mixedsex groups, supporting the subcultural approach. Yet, inconsistent with this approach, male managers and subordinates have higher rates of smiling and laughing in mixed than same-sex groups. And female subordinates have lower rates of smiling with male than female managers, while male subordinates with female managers have the highest rate of smiling. Sex composition of the group clearly has an effect on these nonverbal behaviors. However, women discriminate less between men and women in their expressions of smiling and laughing than men.

Smiling and laughing then, unlike the verbal behaviors, do not seem to be related to authority in any direct way. ¹¹ Gender stereotyped expectations may be stronger for nonverbal than verbal behaviors. Women are expected to smile and laugh more often than men, even in authority contexts. Once women express these behaviors, other members in the group, whether men or women, respond with similar behavior, suggesting a contagion effect. As the group continues to interact, these behaviors become normative for the group (Ridgeway and Diekema 1992).

These findings have several implications for women and men working together in organizational settings. First, similar to Lakoff's (1990) argument, women in business and professional settings may well use speech patterns similar to their male counterparts when legitimated in their authority position. Role requirements and legitimate status of the leader significantly reduce any effect of gender on conversation. Differences may lie in the expression of several nonverbal behaviors, smiling and laughing, depending on the sex composition of the group. Second, the idea perpetuated by popular selfhelp books that miscommunication is a prevalent problem in conversation between men and women may not apply in organizational settings when women are legitimated in their positions. Under these conditions, gender differ-

¹¹ Although position had no significant effect on smiling and only a marginal effect on laughing, empirical evidence suggests that structural power has an effect on other types of nonverbal behaviors, such as looking while speaking, looking while listening, and gesturing (Ellyson et al. 1992).

ences in speech seem to be weaker than in less formal relationships. The reality, however, is that women are often *not* legitimated in their positions within organizations, as Kanter (1977) found.

In general, legitimate authority processes do attenuate gender effects on verbal behaviors, suggesting that we can attribute gender differences in these behaviors to authority rather than to socialization. But gender-stereotyped expectations (learned through socialization processes as suggested by the subcultural approach) and sex composition of the group have an effect on the two nonverbal behaviors, smiling and laughing. Future research in the study of conversation should examine the effect of varying degrees of legitimacy on conversation. Do leaders with low legitimacy use less directive and more supportive language than those with high legitimacy?

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THE ORIGINS OF AFRICAN-AMERICAN FAMILY STRUCTURE*

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I use a new data source, the Integrated Public Use Microdata Series, to trace race differences in family structure between 1880 and 1980. Analysis confirms recent findings that the high incidence among African-Americans of single parenthood and children residing without their parents is not a recent phenomenon. From 1880 through 1960, black children were two to three times more likely to reside without one or both parents than were white children. In recent years, however, the race differential in parental absence has grown. Also, blacks have had a consistently higher percentage of extended households than have whites, but until 1940 this was the result of single parenthood and parentlessness among children: Extended households were more common among whites once the effects of absent parents were controlled.

Two distinctive features of African-American family structure are well known: Blacks are far more likely than whites to become single parents and to reside in extended families. The theories offered to explain these differences are diverse and have generated heated debates. I attempt here to narrow the field of potential explanations for race differences in family structure by presenting a concise and detailed description of changes in black family structure from 1880 to 1980.

Since the turn of the century, social theorists have argued that slavery resulted in disorganization and instability in black families (DuBois 1899, 1909; Elkins 1963; Frazier 1932, 1939; Myrdal 1944). This interpretation culminated with Moynihan's (1965) report, which concluded that the "pathological" nature of black communities could be traced to the deterioration of black family life.

The numerous arguments against the Moynihan report can be divided into two broad cat-

egories. Many theorists have argued that Moynihan got it backwards: The disadvantaged position of blacks is not the consequence of single-parent families, but rather the cause of them. This interpretation is frequently accompanied by the thesis that the black extended family has been a means of coping with both poverty and single parenthood (Allen 1979; Billingsley 1968; Farley 1971; Fischer, Beasley, and Harber 1968; Hofferth 1984; Rainwater and Yancey 1967; Stack 1974). Other theorists have maintained that Moynihan's stress on pathology and disorganization ignores the resilience of the black family, and especially the strength of extended kin ties among blacks (Aschenbrenner 1973; Hays and Mindel 1973; Hill 1971; Martin and Martin 1978; McAdoo 1980; Riessman 1966; Staples 1975). These analysts often point to persistent cultural differences between whites and blacks-originating in slavery or in African culture—to explain both single parenthood and extended family structure (Nobles 1978; Owens 1976; Scanzoni 1971; Shimkin, Shimkin, and Frate 1978).

The controversy over the Moynihan report stimulated a spate of revisionist historical investigations into African-American family structure. These studies asserted that black families in the late nineteenth century were overwhelmingly male-headed and nuclear in structure. Although some authors acknowledged minor differences in family structure between blacks and whites, they all maintained that in practical terms black families were essentially similar to white families (Agresti 1978; Bigham 1981; Carlson 1988; Fursten-

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berg, Hershberg, and Modell 1975; Gutman 1975, 1976; Harris 1976; Krech 1982; Lammermeir 1973; Pleck 1972; Riley 1975; Shifflett 1975). The revisionists thus implied that the distinctive African-American family pattern is of recent origin, and this reinforced the now widespread view that economic disadvantages faced by blacks in the recent past are responsible (Brewer 1988; Wilson 1987).

A more recent group of historical studies has revised the revisionists' conclusion. These investigations have stressed the continuity of African-American family structure by showing that the high frequency of single-parent families among blacks observed by Moynihan in 1965 already existed around the turn of the century (Brown and Kallgren 1989; Goeken 1989; Gordon and McLanahan 1991; Morgan, McDaniel, Miller, and Preston 1993; Ruggles and Goeken 1992). These studies have made it clear, therefore, that the current African-American family pattern was not a response to recent economic changes. To explain the distinctive features of the African-American family, we need to look back at least as far as the nineteenth century.

My investigation builds on the recent historical research. I describe for the first time the long-term trends of single parenthood and extended family structure among blacks and whites, using a new series of census microdata that spans the period from 1880 to 1980. The recent historical studies have shown that single parenthood and extended families were more common among blacks than among whites at the turn of the century, but they have not been able to trace these changes over the course of the twentieth century.

DATA

Until recently, historians lacked adequate data to trace long-term national trends in family structure. With few exceptions, empirical analyses of race differences in historical family structure have focused on a single moment in time. Moreover, the bulk of historical studies have examined living arrangements in one or two communities. We have had no way of determining if the communities are representative, and comparisons between studies have been complicated by variations in data sources, data collection procedures, and classifications of family structure. The most recent historical

studies of African-American family structure have used national census data from the turn of the century, but even they have not yielded statistics that are directly comparable to data available for the recent past.

Now, a new data source, the Integrated Public Use Microdata Series (IPUMS), allows us to generate for the first time a consistent national series of statistics on family structure over the past century (Ruggles et al. forthcoming). The IPUMS is a national historical census database in preparation at the University of Minnesota under funding from the National Science Foundation and the National Institutes of Health. The IPUMS combines national census microdata from a variety of sources. Since 1960, the U.S. Census Bureau has made public use microdata samples available to researchers within a few years of the decennial enumeration (U.S. Bureau of the Census 1972, 1973, 1982). Since 1979, projects carried out at the University of Minnesota, the University of Washington, the University of Pennsylvania, and the University of Wisconsin have converted large national samples of the 1880, 1900, 1910, 1940, and 1950 population censuses into machine readable form (Graham 1979; Ruggles et al. 1993; Strong et al. 1989; U.S. Bureau of the Census 1984a, 1984b). Similar projects are now underway at Minnesota for the 1850 and 1920 census years. Altogether, large samples of census microdata are anticipated for at least 11 census years between 1850 and 1990.

These census files employ a wide variety of sampling strategies, sample units, and coding schemes. The IPUMS imposes a consistent set of definitions and codes on the data, establishing order and maximizing the potential for valid and reliable analysis of long-term change (Ruggles 1991, forthcoming b). When complete, the IPUMS will include national samples of coherent census microdata from all census years for which data are available. I used the preliminary version of the database in this analysis; it includes census data from 1850, 1880, 1910, 1940, 1960, and 1980.

¹ The IPUMS is scheduled to be released in the summer of 1995 through both the National Archives and the Inter-University Consortium for Political and Social Research. A preliminary version of the data series is available from the author. For descriptons of the source data, see text citations. The sample densities used throughout this study

Table 1. Percentage Distribution of Household Composition by Race: United States 1880-1980

			Black					White		
	1880	1910	1940	1960	1980	1880	1910	1940	1960	1980
Fragmentary Households										
Primary individuals	8.5	10.5	15.4	17.6	26.7	5.0	6.2	9.5	14.6	26.7
Single parents	11.7	9.7	8.7	9.9	20.5	8.2	7.4	7.1	5.1	7.1
Total fragmentary	20.3	20.2	24.1	27.5	47.2	13.2	13.6	16.6	19.7	33.9
Married Couple Households										
Childless couples	11.6	16.9	19,6	16.0	10.6	11.0	14.5	20.5	23.2	24.7
Couples with children	45.6	38.5	29.8	31.1	25.1	56.4	51.9	45.6	45.6	34.9
Total married couple	57.3	55.4	49.4	47.1	35.6	67.3	66.5	66.0	68.8	59.6
Extended Households										
Vertically extended	13.1	14.1	16.6	14.1	10.1	10.7	10.9	11.0	6.9	3.9
Other extended	9.4	10.3	9.9	11.3	7.0	8.8	9.0	6.4	4.6	2.6
Total extended	22.5	24.4	26.5	25.4	17.2	19.5	19.9	17.4	11.5	6.6
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of households	12,449	8,616	6,276	4,789	8,387	84,398	70,375	62,678	47,879	69,024
Index of dissimilarity (Black-white, six categories)	10.7	13.4	16.7	21.7	24.0					

Note: Excludes group quarters under 1970 Census definition. Primary individuals are persons heading households with no kin present; single parents are unmarried heads with children and no other kin; childless couples are married couple households with no kin; couples with children are married couples with children and no other kin; extended households are households with kin other than spouse and children; vertically extended are households with ancestors, descendants, or children-in-law of head.

Despite the problems of compatibility introduced by their compilers, the U.S. Public Use Microdata Samples (PUMS) currently constitute the most consistent and comprehensive source available for the study of long-term change in family and household composition. From 1850 onwards, the census definitions of the basic units of enumeration-now called households-have varied only modestly, and the proportion of units affected by such variations has been insignificant. The concepts of quasi-household and group quarters, introduced since 1940, have no clear analogs in earlier censuses, but the PUMS files for all years provide sufficient information to impose a lowest common denominator of the group quarters concept. Moreover, the basic inquiries required to classify household and family composition-relationship to household head or house-

were 1/200 for 1850, 1/100 for 1880, 1/250 for 1910, 1/500 for 1940, and 1/1000 for the remaining years.

holder, marital status, age, and sex—are virtually identical for all available census years since 1880.²

LONG-TERM TRENDS IN HOUSEHOLD COMPOSITION

Table 1 provides a general description of household composition by race from 1880 to 1980. The classification scheme is a compromise be-

² For discussions of the temporal comparability of the census concepts of family and household, see Ruggles (1991) and Smith (1992). The definition of group quarters used here is the one used for the 1970 Census; that definition is the only on that can be applied consistently across all census years from 1880 to 1980. For the sake of consistency, persons residing in group quarters under 1970 Census definitions were excluded from analysis in this study, except for Table 3 and for the statistics from the 1850 Census. On the potential effects of this exclusion, see Ruggles (1988, 1991).

tween the U.S. Census Bureau approach to household structure and the system developed by Laslett (1972) that is widely used by historians. Households are divided into three broad categories on the basis of the composition of the primary family, which is defined as the group of kin related to the household head.3 Fragmentary households consist of primary individuals and single parents residing with their children only. Married couple households include married couples residing with no other kin and married couples residing with their children and no other kin. Extended households include additional kin, such as parents, siblings, or grandchildren of the household head. Vertically extended households are those that include ancestors, descendants, or children-in-law of the household head.

 $\mathbb{N}^{1}\mathbb{R}$

Among both blacks and whites, the most striking change in household structure shown in Table 1 is the increase in the percentage of primary individual households—persons who reside alone or with nonrelatives only. In the nineteenth century, blacks resided as primary individuals significantly more often than whites, but by 1980 this race difference had disappeared. The dramatic rise of the primary individual over the past century has generated a large literature (see for example Kobrin 1976; Ruggles 1988).

For this analysis, the most important categories in Table 1 are single-parent households and extended households. Among blacks, the percentage of single-parent households was relatively stable from 1880 through 1960, and then it increased sharply. The percentage of extended households among blacks was also fairly stable between 1880 and 1960, but has dropped significantly since then.

In all census years, a smaller percentage of white households were fragmentary or extended than were black households, and they more often consisted of married couples residing with children. These race differences increased between 1880 and 1980. The key categories of black household structure, however,—single-parent and extended—were re-

markably stable, at least through 1960. This finding supports the recent studies arguing that the distinctive features of the African-American family have deep historical roots.

Despite this long-standing continuity, the race differential in household composition has not been static. In Table 1 the index of dissimilarity compares the distributions of black households and white households across the six detailed categories. From 1880 through 1980, divergence between black and white household composition increased—the index of dissimilarity rose gradually from 10.7 to 24.0. Thus, although the origins of the characteristic patterns of black household composition can be traced to the nineteenth century, race differences have become far more pronounced over the course of the twentieth century.

THE LIVING ARRANGEMENTS OF CHILDREN

Measurement by households minimizes race differences in family structure. We can obtain a clearer view by focusing on the living arrangements of children. There are several advantages to analyzing children living with single parents instead of single-parent households. To begin with, we can broaden the analysis by looking at children who resided with no parents as well as children who resided with a single parent. Moreover, by measuring the living arrangements of children, we can easily capture single parents who were not household heads and who resided in subfamilies and secondary families. Furthermore this measurement strategy greatly simplifies analysis of measurement error resulting from demographic change.⁴ Finally, children are an important object of study in their own right, and are key to understanding the family as an agent of socialization.

Table 2 shows the percentage of children residing with both parents, with mothers only, with fathers only, and without either parent. The overall percentage of children with one or both parents absent is summarized in Figure 1.

³ These systems are described in U.S. Bureau of the Census (1983) and in Laslett (1972). Following U.S. Census Bureau practice, the term family refers here to any group of related people who reside together, whereas the term household refers to a group of people who share living quarters, regardless of their relationships.

⁴ For technical reasons, it is extremely difficult to account for the effects of demographic factors on living arrangements when measurements are taken at the level of households (see Ruggles 1986, 1987).

Table 2. Percentage Distribution of Living Arrangements of Children by Race and Age: United States, 1880-1980

			Black (ack Children						White	White Children			
1		With	With Single Parent or No Parent	ent or No	Parent				With	With Single Parent or No Parent	ent or No	Parent		
Year/Age Group	Both Parents	Mother Only	Father Only	No Parent	Total w/o Both Parents Total	s Total	Number of Children	Both Parents	Mother Only	Father Only	No Parent	Total w/o Both Parents	s Total	Number of Children
Children Ages 0-14														
1880	70.1	13.1	4.5	12.3	29.9	100.0	28,362	87.3	5.9	2.9	3.9	12.7	100.0	155,559
1910	72.5	13.1	4.0	10.4	27.5	100.0	14,491	89.7	5.1	2.5	2.7	10.3	100.0	99,744
1940	72.7	13.6	3.6	10.1	27.3	100.0	8,846	6.68	9.6	2.1	2.4	10.1	100.0	60,464
1960	1.19	18.2	2.8	11.3	32.3	100.0	7,218	91.4	5.9	1.1	1.6	8.6	100.0	48,521
1980	47.1	37.3	4.0	11.7	52.9	100.0	8,038	84.1	11.7	1.8	2.4	15.9	100.0	40,840
1880, by Age Group														
0 to 4	75.8	12.2	2.7	9.3	24.2	100.0	10,563	92.8	3.4	4.	2.3	7.2	100.0	56,417
5 to 9	71.2	13.4	4.5	10.9	28.8	100.0	9,816	88.2	9.6	2.9	3.4	11.8	100.0	52,446
10 to 14	67.9	13.8	6.5	16.9	37.1	100.0	7,983	80.4	8.7	4.6	6.3	19.6	100.0	46,696
1910, by Age Group	9 02	-	,	7.7	20.2	100	\$ 018	7.42	. 29	=	14	, (,	100	35.896
\$ to 0	71.6	13.5	4 5	10.7	28.4	100.0	5.056	006	4.9	2.5	2.5	10.0	100.0	33,086
10 to 14	65.6	14.9	5.9	13.6	34.4	100.0	4,417	83.9	7.8	4.1	4.3	16.1	100.0	30,762
1940, by Age Group														
0 to 4	9.6	8.6	2.3	8.3	20.4	100.0	2,475	93.8	3.6	1.0	1.6	6.2	100.0	17,791
5 to 9	71.8	14.0	3.6	10.7	28.2	100.0	2,616	0.06	5.5	2.1	2.3	10.0	100.0	18,063
10 to 14	64.0	18.8	5.0	12.1	36.0	100.0	2,651	84.9	8.4	3.3	3.4	15.1	100.0	20,475
1960, by Age Group														
0 to 4	71.3	16.3	1.8	10.6	28.7	100.0	2,796	92.8	2.0	.7	1.5	7.2	100.0	17,765
5 to 9	67.5	18.2	3.1	11.2	32.5	100.0	2,445	91.7	2.7	1.1	1.5	8.3	100.0	16,154
10 to 14	64.2	20.2	3.5	12.1	35.8	100.0	1,977	89.5	7.0	1.7	1.9	10.5	100.0	14,602
1980, by Age Group														
0 to 4	46.3	33.2	4.1	16.5	43.7	100.0	2,542	86.5	9.1	1.7	2.7	13.5	100.0	12,844
5 to 9	48.2	38.4	4.1	9.3	41.8	100.0	2,647	843	11.9	1.5	2.2	15.7	100.0	13,284
10 to 14	46.8	40.2	3.7	9.3	43.2	100.0	2,849	81.2	14.1	2,3	2.4	18.8	100.0	14,712

^a Standardized by single years of age to control for changing age structure of children (standard population was all children ages 0 to 14, 1850 to 1980).

Note: Excludes children in group quarters under the 1970 Census definition.

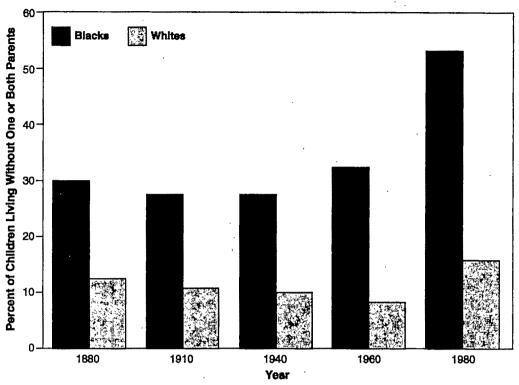


Figure 1. Percentages of Children Ages 0 to 14 With One or Both Parents Absent, by Race: United States, 1880-1980

The presence of parents was determined from information available consistently from 1880 to 1990: relationship to head, age, sex, marital status, and sequence within the household.⁵ From 1880 through 1960, about 30 percent of black children ages 0 to 14 resided without one or both parents. By contrast, only about 10 percent of white children resided without one or both parents over the same years. From 1960 to 1980, parentlessness and single parenthood rose sharply among both blacks and whites. The rate of change for whites was somewhat

greater over those two decades than it was for blacks: The percentage of white children residing without both parents rose 85 percent, compared with only a 64 percent increase among black children. Measured as an absolute percentage, however, the recent change has been far greater among blacks, because they started from a higher base percentage. Parental absence among black children rose from 32 percent in 1960 to 53 percent in 1980, while among white children the increase was from 9 percent to 16 percent over the same period.

some additional variables which more consistently identified step-children and adopted children (i.e., surname, detailed relationship categories, number of children surviving, number of children ever born, parental birthplaces, marriage age, and duration of marriage). Since this additional information is not available across all census years, it could not be used to construct a consistent set of parent-child links. Accordingly, the linking procedure used was more likely than that used for the 1910 study to assign parenthood to a few people who are actually step-parents or foster parents. Any such errors, however, should be consistent across all census years studied.

⁵ In the great majority of cases, the determination of the parent-child link was based entirely on family relationship and age. Occasionally, there was more than one potential mother or father for a given child; in such circumstances, the choice between alternate parents was based on marital status, if possible, or proximity within the household if not. Detailed programming instructions for the linking procedure appear in Ruggles et al. (1993). The percentage of children reported in Table 2 as residing without mothers in the 1910 census year is slightly different from the figures reported in Morgan et al. (1993). This is because the IPUMS uses a different procedure to link parents and children than that used in the 1910 project. The 1910 project used

Despite the dramatic changes of recent years, it is clear that the race differential in childrens' residence with parents is not new. In every census year, the percentage of black children ages 0 to 14 living without one or both parents was at least twice as high as the percentage among white children. The percentage of children residing without either parent has remained remarkably stable over the long run, at 10 to 12 percent for blacks and 2 to 4 percent for whites.

Some of the historical differences between blacks and whites in living arrangements of children resulted from differences in mortality; children could not reside with parents who were dead. In the late twentieth century, few parents die before their children are grown. However, parental mortality in the ninteenth century was common.

Table 3 presents estimates of the effects of parental mortality on residence with parents in 1880. These estimates should be viewed as approximations, since our knowledge of race differences in mortality in the late nineteenth century is inexact. Panel A presents the assumed life expectancy at birth by sex for each race based on life tables for the period from 1870 to 1880. Panel B shows the percentage of fathers and the percentage of mothers who would be dead for each age group of children under these mortality conditions. Panel C shows the percentage of children with absent fathers and absent mothers. These figures are similar to those in Table 2, but they include children who were residents of group quarters.⁶ Panel D of Table 3 estimates the percentage of children with a surviving parent who is absent, calculated from panels B and C. The percentages of children with a living absent parent may be slightly understated, because panel C includes some unknown percentage of adopted and step-children residing with socially-defined parents whose biological parents were dead.7

Table 3. Estimated Effects of Parental Mortality on Residence With Parents, by Race and Age: United States, 1880

	Bla	cks	Wh	ites
Variable	Fathers	Mothers	Fathers	Mothers
A. Assumed Life Expe	ectancy o	t Birth		
	33.0	34.4	43.2	46.1
B. Estimated Percent Deceased Parent	of Child	en Ages 0	to 14 W	ith a
Ages 0 to 4	4.6	4.0	2.8	2.1
Ages 5 to 9	13.7	11.7	8.8	6.5
Ages 10 to 14	23.3	19.7	15.7	11.3
Total ages 0 to 14	13.0	11.1	8.7	6.3
C. Observed Percent Absent Parent	of Child	ren Ages (0 to 14 V	ith an
Ages 0 to 4	23.2	13.9	6.6	4.5
Ages 5 to 9	26.1	17.3	10.1	7.3
Ages 10 to 14	32.6	25.4	16.4	12.3
Total ages 0 to 14	26.9	18.3	10.7	7.8
D. Estimated Percent With a Living Abs			0 Throug	gh 14
Ages 0 to 4	19.5	10.3	3.9	2.5
Ages 5 to 9	14.4	6.3	1.4	0.9
Ages 10 to 14	12.1	7.1	0.8	1.2
Total ages 0 to 14	15.9	8.1	2.2	1.6

^{*} Includes children residing in group quarters

Table 3 further illuminates the findings presented in Table 2. Among white children in 1880, parental mortality was the main reason for the absence of parents: Only about 2 percent of whites resided separately from a living mother or a living father. Despite the higher mortality of blacks, on the other hand, less than half of the percentage of children residing without both parents can be accounted for by

of their child until the time of the census. Parental ages at the births of their children were tabulated directly from the 1880 Public Use Sample for children less than age 2 residing with a parent by the race and sex of the parent. The age distribution of children of each race was also tabulated from the 1880 sample. The life tables for blacks were taken from Eblen (1974). For whites, I used a model West level 11.45 life table (Coale and Demeny 1983), a level recommended by Michael Haines for adult

⁶ Figures in Panel C differ from the figures presented in Table 2 because Panel C includes children residing in group quarters; unlike later census years, the 1880 sample allows full identification of family relationships for persons in group quarters. Since children residing in group quarters were especially likely to have deceased parents, they must be included for comparison with the parental mortality estimates

⁷ I used a simple life table approach to measure parental survival, which involved calculating the probability of death for each parent from the birth

b This estimate was calculated as:

Table 4. Percentage Distribution of Living Arrangements of Free Black Children and White Children, by Age: United States, 1850

			Free Black	Black Children	_					White	White Children			
	The state of the s	With	With Single Parent or No Parent	ent or No	Parent				With	With Single Parent or No Parent	ent or No	Parent		
Year/Age Group	Both Parents	Mother Only	Father Only	No Parent	No Total w/o Parent Both Parents Total	s Total	Number of Children	Both Parents	Mother Father Only Only	Father Only	No Parent	No Total w/o Parent Both Parents Total		Number of Children
Age group*														
0 to 4	63.9	23.2	5.7	7.2	36.1	100.0	332	90.1	4.2	2.4	3.3	6.6	100.0	13,852
5 to 9	51.9	24.8	7.0	16.3	48.1	100.0	258	84.6	6.3	3.9	5.2	15.4	100.0	13,325
10 to 14	40.1	12.6	6.1	41.2	59.1	100.0	262	74.5	8.6	6.1	10.9	25.5	100.0	11,999
Total	52.6	20.2	6.3	21.0	47.4	100.0	852	83.4	6.3	4.0	6.3	16.6	100.0	39,716

· Standardized by single years of age to control for changing age structure of children (standard population was all children ages 0 to 14, 1850 to 1980) Note: Excludes persons in group quarters under 1850 PUMS definition. parental death. Once we controlled for the effects of mortality, parental absence was over five times more frequent among blacks than it was among whites.

The race difference in residence with parents in the late nineteenth and early twentieth centuries was most pronounced among very young children. Overall, for example, fewer than 5 percent of U.S. children under age five had a deceased father in the late nineteenth century; but among blacks, 23 percent under age five resided without a father, compared with 7 percent of whites. The large race differential among the very young suggests that the African-American pattern of residence with a single parent did not usually result from the departure or death of a parent; in most cases, only one parent was present from a very early age. Indeed, Panel D of Table 3 suggests that the percentage of absent parents among black children with surviving parents actually declined with age, although this finding may be an artifact of exaggerated black mortality.8

We can push the analysis back 30 years prior to 1880 by comparing the living arrangements of free black children to white children in a nationally representative subsample of the 1850 PUMS currently in preparation at the University of Minnesota (Menard et al. forthcoming). Unlike the more recent censuses, the 1850 enumeration did not provide explicit information about family relationships. I have therefore developed a system of rules for inferring family relationships on the basis of age, sex, surname, and sequence in the household. I tested these

mortality in the period 1870 to 1880 (personal communication, 21 Apr. 1993; cf. Haines 1979). One might assume that the effects of parental mortality could be assessed by looking at widowhood among single parents, but as Preston, Lim, and Morgan (1992) have demonstrated, the marital status variable is too unreliable in historical census data to use it for this purpose. (On the problem of distinguishing biological parents from socially-defined parents, see note 5).

⁸ Using data on child survival from the 1900 Census, Preston and Haines (1991) recently demonstrated that demographers have overestimated black child mortality in the late nineteenth century. If we assume that black adult mortality has been similarly overstated, the decline of parental absence with increasing age of children disappears. Lower black mortality would also imply a higher frequency of parental absence among black children with surviving parents.

rules against the 1880 and 1910 census years so that the reliability of the inferred relationships could be evaluated. For simple family relationships, the inference procedure is highly accurate; overall, for example, the rules correctly identify 99.4 percent of explicit spouse relationships and 96.5 percent of parent-child relationships in 1880.9 The complete inference procedure is described in Menard et al. (forth-coming). Most of the parent-child relationships missed by the procedure occurred with married or widowed daughters whose surnames differed from those of their parents; this source of error does not affect analysis of the living arrangements of children under age 15.

Table 4 reports the percentages of free black children and white children residing with each combination of parents in 1850. The race difference in 1850 is considerably more dramatic than in later census years; overall, almost half of free black children (47.4 percent) resided without one or both parents, compared with 16.6 percent of white children. A significant part of this difference is a result of the extremely high percentage (41.2 percent) of free black children ages 10 to 14 who resided with no parent. Most of these children were apparently servants or laborers in farm households. Perhaps many parents of these children remained in slavery and were therefore not included in the enumeration. Without knowing more about how slaves were freed, we cannot directly compare the figures in Table 4 with those from subsequent census years; the reasons for parental absence among free black children in 1850 may differ greatly from the reasons for parental absence in later census years. Nevertheless, Table 4 provides dramatic evidence that the African-American pattern of residence without two parents did not begin with the abolition of slavery.

EXTENDED FAMILY STRUCTURE

As noted earlier, many investigators have suggested that the high frequency of extended

Table 5. Percentage of Households Extend cent Distribution of Households Residence in Primary Family of S and Parentless Children: United § 1980

			_
Presence of	Perc Exter		D:
Single Parent			
or Parentless Child	Black	White	_
1880			
No single parent or parentless child presen	12.3 t	15.5	
Single mother present	22.0	31.8	
Single father present	19.8	28.2	
Parentless child present	91.8	95.1	
Total, all households	22.5	19.5	1
1910			
No single parent or parentless child presen	14.2 t	16.9	
Single mother present	40.0	39.6	
Single father present	33.0	39.0	
Parentless child present	94.4	97.4	
Total, all households	24.4	19.9	1
<i>1940.</i>			
No single parent or parentless child presen	17.7 it	15.2	
Single mother present	51.8	41.3	
Single father present	41.3	37.1	
Parentless child present	95.0	93.2	
Total, all households	26.4	17.4	1
1960			
No single parent or parentless child preser	16.1 it	10.0	
Single mother present	40.8	30.5	
Single father present	46.7	26.2	
Parentless child present	96.0	90.8	
Total, all households	25.4	11.5	:
1980			
No single parent or parentless child preser	9.9 1t	5.3	
Single mother present	21.5	17.3	
Single father present	27.0	20.2	
Parentless child present	96.4	96.5	
Total, all households	1 7.2	6.6	

Note: For number of households, see cludes persons in group quarters under 1970 nition. Extended households contain relati married couple and their children, such as I lings of the head. Single parents are per spouses residing with children under th parentless children are persons under age 15 no parents.

⁹ Table 4 excludes persons residing in group quarters under the 1850 PUMS definition instead of the 1970 Census definition used in the other tables. This is because the 1970 definition cannot be constructed for 1850, since it depends on information about family relationships (see note 2). The 1850 PUMS group quarters definition is described in Menard et al. (forthcoming).

households among blacks has been a means of coping with single parenthood. This hypothesis is easily tested. Table 5 compares the percentage of black extended households and white extended households, broken down according to the presence in the primary family of single parents and their children under age 15 and parentless children under age 15. In all census years among both blacks and whites, households containing single parents or parentless children were far more likely to be extended than households without such members. The pattern is especially striking for primary families with parentless children: At least 90 percent of such households were extended in all periods. Of course, this high percentage is not surprising, since children in primary families without any parents can only reside in nuclear families if they are listed in the census as household head or spouse.

Before 1940, the presence of single parents or parentless children can account entirely for the higher percentage of extended households among blacks. Indeed, when we controlled for single parenthood and parentlessness, the percentage of extended households was significantly higher among whites than among blacks in 1880 and 1910. After 1940, black households were more likely to be extended, regardless of whether or not they contained single parents or parentless children. Even in 1980, however, the presence of single parents and parentless children explains 56 percent of the race difference in the overall percentage of extended households (cf. Tienda and Angel 1982).

Tables 1 and 5 show that the overall percentage of extended households among blacks increased steadily from 1880 through 1940, dropped slightly in 1960, and then declined steeply in 1980. Among whites, the peak percentage of extended households occurred in 1910, and since then the percentage has fallen consistently. In no period did the percentage of extended households exceed 27 percent for blacks and 20 percent for whites.

These long-term trends in extended family structure are somewhat misleading, because over the past century the opportunities to reside in extended families have shifted dramatically. Almost 30 years ago, Levy (1965) argued that, although the extended family is often the ideal type in high mortality societies, it rarely dominates in reality. Levy pointed out that under high mortality conditions, few people can

reside with elderly kin. In particular, three-generation families are necessarily rare in societies in which most people die before their grandchildren are born or very shortly thereafter (Berkner 1972, 1975; Levy 1965).

Mortality is not the only demographic influence on the frequency of multigenerational families. In the United States and Northwestern Europe, extended families that include multiple married siblings have been extremely rare for centuries (Laslett 1972; Ruggles 1987; Wall 1983). Because of this, fertility has had a critical impact on the potential frequency of multigenerational families. When the children from a large family marry, they all ordinarily reside in separate households, and only one of those households can include the elderly parents. Marriage age is also important; late marriage sharply limits the period of overlap between generations, thus reducing or eliminating the potential for multigenerational families. 10 The increase in life expectancy, decline in fertility, and fall in marriage age over the last century have greatly increased the potential for multigenerational family structure. Taken together, high mortality, high fertility, and relatively late marriage in the nineteenth century meant that a very small population of elderly people was spread thinly among a much larger younger generation. Under these circumstances, the percentage of households extended by elderly relatives was necessarily small.

Accounting for the effects of these changes on the relative frequency of multigenerational households is a complicated task. Family demographers have devised numerous models to estimate the effects of historical demographic change on multigenerational family structure (Bradley and Mendels 1978; Burch 1970; Coale 1965; Glass 1966; Ruggles 1987; Wachter, Hammel, and Laslett 1978). The conflicting results of these models have stimulated lively debate, but there is no consensus on methods for controlling for the effects of demographic change (De Vos and Palloni 1989; Kertzer 1991; King 1990; Ruggles 1990 forthcoming a).

¹⁰ On the relative sensitivity of coresidence to marriage age, fertility, and mortality, see Ruggles (1987) and Wachter et al. (1978). Both studies concluded that marriage age is the critical factor, but since marriage age changed modestly from the late nineteenth century to the late twentieth century, fertility and mortality were more important in that period.

Table 6.	Percentage Distribution of Living Arrangements of Elderly Individuals and Elderly Couples, by Race: United
	States 1880-1980

		Ele	derly Bla	acks			E	lderly W	hites	
Living Arrangement	1880	1910	1940	1960	1980	1880	1910	1940	1960	1980
Residing Without Relatives										
Alone/spouse only	17.0	20.2	25.0	36.9	51.5	15.7	20.0	30.7	53.4	73.8
Alone/spouse and nonrelatives	14.5	9.8	10.3	8.2	6.3	9.8	7.7	9.1	5.7	2.1
Residing With Relatives										
Total with any relative	68.5	70.1	64.6	54.8	42.2	74.5	72.3	60.2	40.9	24.1
With own child	48.5	51.6	44.8	32.9	25.6	60.7	<i>5</i> 8.9	47.6	28.2	16.4
With own adult child	35.4	40.4	39.5	29.8	22.8	55.6	55.1	45.3	26.6	15.5
With related single parent	t 12.7	13.7	9.0	6.5	4.1	7.1	5.4	3.3	1.8	0.9
With related parentless child	18.6	16.4	10.4	11.9	6.2	6.5	3.6	2.0	1.2	0.5
With relatives other than single parents and parentless children	37.2	40.0	45.2	36.4	31.9	60.7	63.3	54.9	38.0	22.7
Total Percent	100.0	100.1	99.9	99.9	100.0	100.0	100.0	100.0	100.0	100.0
Number of cases	1,609	1,136	1,110	1,080	1,709	13,284	12,432	13,846	121,02	17,789

^a Subcategories of residence with relatives are not mutually exclusive.

Notes: Excludes persons in group quarters under 1970 Census definitions. Married couples treated as single observations; adult children are aged 21 or over; single parents are unmarried persons living with their own children (under age 15); parentless children are less than 15 years with no parent living in the household.

The problem can be minimized, however, by assessing extended family structure from the perspective of the elderly. The elderly are the only demographic group whose residential opportunities have remained reasonably stable over the past century. In all periods, the great majority of elderly have had the demographic possibility of residing with their children, even though only a minority of the younger generation has had the opportunity to reside with elderly parents. ¹¹

Table 6 presents several measures of the living arrangements of persons ages 65 or older from 1880 to 1980. Elderly married couples are

considered to be a single observation because the living arrangements of husbands and wives were not ordinarily determined independently. These statistics present a very different picture from the one on extended household structure presented earlier.

The majority of elderly blacks and elderly whites in the nineteenth century resided with relatives, usually their adult children. Among both blacks and whites, co-residence of the elderly with kin declined throughout the twentieth century. The magnitude of change, however, was far greater among whites than among blacks. In 1880, elderly whites were more likely to reside with relatives than were elderly blacks. The difference is especially noticeable for residence with adult children: In 1880, 55 percent of elderly whites lived with adult children, compared with only 36 percent of blacks. Thus, just as young blacks more often resided without their parents than did young whites, elderly black parents more often resided without adult children.

The percentage of elderly blacks residing with relatives remained lower than that for elderly whites until 1940. After 1940, resi-

Although demographic changes have had some effects on the living arrangements of the elderly over the past century, it is easy to demonstrate that those effects are modest. The most important factor is the decline in fertility, which meant that the elderly had fewer children with whom they could reside. Offsetting this change were declines in child mortality and increases in the ages of the elderly. For general analyses of the effects of long-term demographic change on the living arrangements of the elderly, see Ruggles (forthcoming c) and Smith (1986).

dence with relatives declined almost twice as rapidly among whites as among blacks, so that by 1980, 42 percent of elderly blacks resided with relatives, compared with only 24 percent of elderly whites. The current race differential in multigenerational living arrangements is therefore of recent origin and did not result from changes among black families, but rather from an extremely rapid change among white families. Therefore, any explanation for why blacks reside with relatives comparatively more often than whites should actually focus on the reasons for the extraordinary decline in white co-residence over the past century. That, however, is the subject of another paper (Ruggles forthcoming d; Ruggles and Goeken 1992).

The persistent race difference in family structure is not in extended family structure, but rather in single parenthood and parentlessness among children. As shown in Table 6, those are the only categories in which black coresidence exceeded that of whites before 1960. In fact, the percentage of elderly blacks residing with relatives other than single parents and parentless children (bottom row of Table 6) was lower than that for whites until 1980. Thus, the key to understanding the origins of African-American family structure lies not with the extended family, but rather with the living arrangements of children.

DISCUSSION

First, I have confirmed the finding of recent studies that the high incidence of single parenthood and children residing without parents among blacks is not new. The pattern is clearly evident as far back as 1850 among free blacks. From 1880 through 1960, the percentage of black children with at least one absent parent was fairly stable and about two-and-one-half times greater than the percentage among whites. Recently, the percentages of both black children and white children with absent parents have risen dramatically.

Second, I have shown that although the overall percentage of extended households has been consistently higher for blacks than for whites, in the early period this was the result of single parenthood and parentlessness among children. In fact, until 1940 extended households were more common among whites than among blacks once the effects of absent parents were

controlled. Moreover, when I limited the effects of demographic changes by focusing on the elderly, it was apparent that the higher percentage of extended arrangements among blacks when compared to whites is a recent phenomenon brought about by an extremely rapid decline in extended family structure among whites.

Race differences in family structure have expanded throughout the twentieth century, especially over the past three decades. But the fundamental differences in the percentage of children residing without parents began well over a century ago. The critical question remains: What is the source of this distinctive African-American pattern of single parenthood? Recent economic changes can be invoked to explain the growing differential between black family structure and white family structure, but they cannot explain why blacks started from a higher base.

Two alternative explanations for the origins of the African-American pattern of single parenthood and parentlessness remain open. First, residence of children without both parents could have been a response to the socioeconomic conditions faced by newly-freed blacks after the Civil War and by free blacks in 1850. Second, the pattern could simply reflect a difference in social norms between blacks and whites, which could have developed either through the experience of slavery or could have its roots in differences between European and African cultures.

Sociologists and historians have proposed a variety of economic explanations for the disruption of black families after the Civil War. The simplest and most commonly cited of these is that conditions of extreme poverty destabilized the black family. In addition, investigators have pointed to high female laborforce participation, inadequate employment opportunities for males, and narrow wage differentials between men and women as factors that may have encouraged marital instability among blacks (Morgan et al. 1983; Rolison 1992; Sanderson 1979).

Causal hypotheses such as these are difficult to test. Even for the late twentieth century, for which individual-level economic data are readily available, the effects of economic factors are difficult to measure: It is easy to show that in recent years single parenthood has been associated with poverty, but that may be largely

because single parenthood causes poverty (Eggebeen and Lichter 1991; McLanahan 1985; P. Ruggles 1990). Assessing the economic hypotheses in the nineteenth century, when the high proportion of parental absences is first observed, is even more problematic, since few individual-level socioeconomic indicators exist.

Nevertheless, some preliminary findings from the 1880 PUMS suggest that the simplest economic interpretation of the black family pattern may be inadequate. First, literate black mothers of young children were less likely to reside with a spouse than were illiterate mothers. Second, poor local economic conditions apparently were not associated with single parenthood among blacks: In fact, there was a significant positive relationship between single parenthood and per-capita wealth by county. Thus, blacks in 1880 who faced the worst conditions—illiteracy and residence in the poorest districts—had the highest odds of residing in a two-parent family. Among whites in 1880, by contrast, such poor conditions were associated with absent parents. Although these findings are subject to alternate interpretations, they nevertheless discourage an explanation of the nineteenth-century black family pattern strictly in terms of poverty.12

What, then, are the origins of the current pattern of African-American family structure? Economic explanations cannot be ruled out, but they have to be more subtle than the simple thesis that single parenthood resulted from economic stress. To assess the effects of socioeconomic factors on the black family in the late nineteenth century, it will probably be necessary to turn to qualitative sources and local studies based on linked census listings.

All things considered, the cultural explanations appear just as persuasive as the economic ones. It is likely that there have been persistent differences between blacks and whites in norms about residence with spouses and children. Given the radical differences in their backgrounds and experiences, it would be remarkable if African-Americans and white Americans in 1880 had an identical set of family values. European norms transmitted by American masters under slavery doubtless influenced the black family, but the experience of slavery and African traditions were probably just as important.

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¹² Among black mothers with children under age 15, 22.3 percent of those who could read resided without a spouse, compared with 20.2 percent of those who could not read. For whites, by contrast, the comparable figures were 7.9 percent for literate mothers and 11.6 percent for illiterates. The pattern is similar for fathers. The findings on the relationship of family structure to county per capita wealth were obtained by linking the 1880 PUMS to the county-level data file for 1880 created by the Inter-University Consortium for Political and Social Research (1965). The positive correlation of assessed county real and personal property per capita and parental absence for black children was significant (p < .001). Such a pattern could result from the differential migration of single parents to wealthy counties, but it is noteworthy that the opposite pattern obtained for whites.

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EFFECTS OF A PARENT'S DEATH ON ADULT CHILDREN: RELATIONSHIP SALIENCE AND REACTION TO LOSS*

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In this study we assess the impact of a parent's death on adult children's physical and psychological functioning. Individuals from 24 to 96 years old were interviewed in 1986 (N = 3,617) and again in 1989 (N = 2,867). In the intervening three years, 207 respondents experienced the death of a biological parent. Our results indicate that when compared to adult children who are not bereaved, bereaved adult children experience a significant increase in psychological distress and alcohol consumption and a decline in physical health status. We also developed a theoretical framework to guide an analysis of group differences in adult children's reactions to a parent's death. Our analysis shows that some groups experience a substantially greater decline in functioning than others following a parent's death, whereas other groups actually experience improved functioning following a parent's death. Depending on the type of outcome assessed, several factors are associated with children's reactions to a parent's death: age and marital status of the child, gender of the child and the deceased parent, the quality of previous adult interactions with the deceased parent, and childhood memories of the deceased parent.

ost research on the effects of a parent's death has been concerned with effects on minor children. This research overwhelmingly has indicated that negative effects on young children are substantial (Stillion and Wass 1984). However, the death of a parent is much more likely to occur when children are middle-aged than when they are minors. Only 1 in 10 children has lost a parent by age 25 but by age 54, 50 percent of children have lost both parents, and by age 62, 75 percent have lost both parents (Winsborough, Bumpass, and Aquilino 1991). While the death of a parent is a common life event of adulthood (Wins-

borough et al. 1991), there has been little research on how the death of a parent affects adult children. Our study addresses this issue using a prospective study design and a national sample.

FAMILIES OF LATER LIFE: WHY A PARENT'S DEATH MATTERS

Relationships with parents have unique symbolic importance for adult children (Atkinson 1989; Rossi and Rossi 1990). This symbolic importance derives, in part, from special aspects of the parent-child relationship that set it apart from other types of relationships. For example, initially a child is fully dependent on the parent for survival; parents socialize the child and help shape the child's definition of self (Rosenberg 1979). As the thriving practices of psychotherapists suggest, this parental influence continues to be important throughout adulthood, even in the absence of physical proximity and perhaps beyond the death of the parent (Atkinson 1989; Rossi and Rossi 1990). Social norms encourage continued relationships and mutual identification of parents and children throughout life (Atkinson 1989). The symbolic importance of intergenerational relationships may be even greater now than in the past because the duration of the parent-child relationship is longer than at any previous

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time—the life spans of parents and children now commonly overlap by 50 years or more.

Social interaction patterns also suggest that relationships with parents remain central to adult children's lives. Parents and adult children typically remain in frequent contact with one another (Rossi and Rossi 1990), share many values and attitudes (Glass, Bengtson, and Dunham 1986), engage in mutual exchanges of support and services (Mancini and Blieszner 1989), and feel high levels of positive sentiment toward one another (Bengtson, Mangen, and Landry 1984).

Finally, empirical evidence indicates that relationships with parents are important to an adult child's psychological well-being. Studies that focus on adult children's provision of care to old and infirm parents show that providing care can have detrimental effects on children's well-being (Mancini and Blieszner 1989). More commonly, however, parents provide assistance and support to adult children, and this may enhance the children's well-being. For example, Bankoff (1983) found that parents were the most helpful source of emotional support to recently widowed daughters. Adult children are more likely to characterize their parents as emotionally supportive than as critical or demanding, and socioemotional support from parents is inversely associated with psychological distress among adult children (Umberson 1992a).

RELATIONSHIP SALIENCE AND REACTIONS TO PARENTAL LOSS

Although many people experience psychological and physical symptoms following the death of a significant person, particularly of a spouse or child, some individuals appear to react to such losses more strongly than others (Stroebe and Stroebe 1987). In part, this is because particular social roles and role identities are more salient to some individuals than to otherswith salience indicating the degree of centrality or importance that the role has for the individual. When life events disrupt role identities, the degree of disruption and distress that follows the life event is linked to the salience of the role or roles affected (Burke 1991; Mutran and Reitzes 1984; Thoits 1991). This suggests that individuals for whom relationships with parents (and, by definition, identities as children) are more salient will respond more strongly to the death of a parent.

However, response to parental loss is further complicated because highly salient relationships may be either positive or negative in quality. The quality of relationships with parents may further influence the symbolic meaning and value of the relationship and the child's subsequent reaction to a parent's death. For example, Wheaton's (1990) work on role histories suggests that loss of a strained relationship results in less distress than loss of a neutral or positive relationship. We hypothesize that loss of highly salient and salient-positive relationships will result in greater distress than will loss of low salience or salient-negative relationships.

A substantial literature on later-life families suggests three sociological factors that are associated with the degree and quality of filial relationship salience: sociodemographic characteristics of the child, gender of the parent, and previous social interactions between parent and adult child.

Child's Sociodemographic Characteristics

Individuals in different sociodemographic positions face different constraints, demands, and opportunities in their daily lives. These life experiences shape the meaning and importance of relationships with parents for adult children (Umberson 1992a). For example, social structural features encourage females to place more emphasis than males on relationships—and on family relationships in particular (Antonucci 1990). Previous research suggests that filial roles are generally more salient and more positive for daughters; adult daughters are in more frequent contact with parents (Umberson 1992a) and report greater affective closeness (Rossi and Rossi 1990) with parents than do adult sons. These findings suggest that daughters would be more adversely affected by the death of a parent than would sons.

The salience of relationships with parents may also depend on the marital status of the child. Unmarried children are more likely to receive instrumental or financial assistance from parents (Rossi and Rossi 1990) and to return home at times to live with parents (Ward and Spitze 1992). While there is little specific information about never-married children, several studies identify unique features of relationships between parents and widowed or divorced children. Widowed children visit with

parents more often and report higher levels of emotional support from parents than do married children (Bankoff 1983; Umberson 1992a). This suggests that widowed children would be more adversely affected by a parent's death than married children. Divorced adult children have more contact and receive more assistance from parents than do married children (Huber and Spitze 1988). On the other hand, divorced adult children report greater strain in relationships with parents (Umberson 1992a). Taken together, previous research does not yield a clear hypothesis about differences between married and divorced children in responses to a parent's death.

Income (Treas and Bengtson 1987) and education (Rossi and Rossi 1990) of adult children are inversely related to children's involvement with parents, perhaps because of greater structural need and interdependence in lower socioeconomic families. This involvement appears to be generally positive for parents and children (Treas and Bengtson 1987) and suggests that parental death would result in stronger adverse effects on individuals with low levels of income and education than on those with high income and education.

Several authors have argued that intergenerational ties are closer in black families than in white families (Sussman 1985; see a review by Chatters and Taylor 1993). However, racial differences in family closeness may be due to other factors, such as socioeconomic status (Antonucci 1985; Mutran 1985). In black families, children are more likely to identify their mothers than their fathers as a source of assistance (Chatters and Taylor 1993), and, compared to nonblack adult children, black adult children report that their mothers are more emotionally supportive (Umberson 1992a). Although the literature does not suggest a clear hypothesis about racial differences in responses to parental death, it does suggest that relationships with mothers may be more salient to black children than to white adult children; therefore, black adult children may be more adversely affected than white children by a mother's death.

Older adult children seem to have more intimate (Rossi and Rossi 1990) and more positive relationships (Umberson 1992a) with parents than younger adult children. On the other hand, younger adult children see their parents more often (Rossi and Rossi 1990) and receive more support of various types from their par-

ents (Cooney and Uhlenberg 1992). Furthermore, research on the timing of life course events (McLanahan and Sorensen 1985) suggests that the death of a parent would have less impact on older adult children because parental death is normative late in life. So, even though the gerontological literature suggests that older adult children experience greater positive relationship salience, it suggests they might be less affected by a parent's death than younger children.

Gender of the Deceased Parent

A parent's gender may be the most important social characteristic in determining intergenerational relationship salience. Throughout the life course, social-structural contingencies associated with gender foster greater closeness between children and their mothers than between children and their fathers. Rossi and Rossi (1990) reported that adult children's relationships with mothers are more likely to be characterized by shared values and views, greater affective closeness, and greater stability than are relationships with fathers. These findings suggest that a mother's death would be more distressing to adult children than a father's death.

Past Social Interactions With the Deceased Parent

The significance and meaning of a parent's death may also depend on the quality of previous social interactions between the parent and child. These interactions help to form the child's own definition of self (Rosenberg 1979; Gecas and Schwalbe 1983; Atkinson 1989) and to shape the symbolic meaning of the relationship for the child. Research and theory on parent-child relations have suggested that both childhood and adult interactions with parents are associated with the well-being of adult children (Rossi and Rossi 1990; Umberson 1992a). We hypothesize that adult children who assess childhood memories of the deceased parent as more problematic will be less adversely affected by the death than will children without such memories since the latter group is presumably losing a more salient-positive relationship.

Similarly, adult social interactions with parents vary in intensity and quality. We hypothesize that the loss of a parent with whom the adult child was more closely and positively involved prior to the death will be more upsetting than the loss of a parent with whom the adult child had little contact or had more strained interactions. Many adult children witness the slow decline of a parent's health and sometimes provide care to the parent prior to death. Providing such care can be stressful for the child (Mancini and Blieszner 1989) and affect the quality of the intergenerational relationship. We hypothesize that a parent's death will have less impact on the adult child if the parent was mentally or physically impaired prior to the death.

PREVIOUS RESEARCH ON FILIAL BEREAVEMENT

Only a few studies have directly addressed how the death of a parent affects adult children. Most of these studies were conducted by clinicians who observed that a parent's death precipitated severe distress in patients (e.g., Birtchnell 1975; Horowitz et al. 1981; Kaltreider and Mendelson 1985). Oualitative research (Moss and Moss 1983) and at least one survey of recently bereaved adult children (Scharlach 1991) also suggest that filial bereavement adversely affects adult children. Scharlach's (1991) survey of 220 bereaved adult children concluded that 25 percent of the respondents experienced impaired social and emotional functioning for from one to five years following the loss. However, all of these studies share some methodological problems. First, all lacked control groups—the psychological status of bereaved children could not compared to nonbereaved children. Seemingly high levels of distress among the bereaved may have been no higher than distress in a comparable sample of nonbereaved adult children. Second, since the data were cross-sectional and collected after the parent's death, post-bereavement functioning could not be compared to pre-bereavement functioning. Retrospective reports about relationships with parents are highly subject to bias-children may idealize their deceased parent or distress may color memories of past relationships with parents.

While there has been increasing attention to filial bereavement in adulthood, at this time there is no empirical verification that bereaved adult children are significantly more distressed than their nonbereaved counterparts, and no studies have addressed how filial relationship saliance affects reactions to the death of a parent. The prospective data used in this study have provided a unique opportunity to analyze how the death of a parent affects adult children in the general population: Our data allowed us (1) to compare over time the physical and psychological functioning of adult children who have experienced the death of a parent with adult children who have not had this experience and (2) to test the filial salience hypothesis.

METHODOLOGY

Data

The data for this study are from a national two-wave panel survey of individuals, ages 24 to 96 in 1986 in the contiguous United States (House 1986). This survey was designed to assess issues of health, productivity, and social relationships over the life course. Face-to-face interviews lasting approximately 90 minutes each were conducted with individuals in 1986 (N = 3,617) and again in 1989 (N = 2,867). Between 1986 and 1989, 207 adults in the sample experienced the death of a biological parent. We compared this group of individuals to individuals who had at least one living bio-

¹ Data from Wave 2 of the Americans' Changing Lives Survey were obtained through the Survey Research Center, Institute for Social Research, University of Michigan, Ann Arbor, MI.

² The attrition rate between the 1986 and 1989 interviews was 21 percent (N = 750). Twenty-two percent of that attrition (N = 166) was due to mortality of respondents; the remaining attrition (N = 584) was due to nonresponse. Excluding deceased respondents, nonrespondents were more likely to be black, male, never-married, of low socioeconomic status, and to exhibit higher scores on psychological distress and alcohol consumption, Individuals who were more likely to be distressed by a parent's death may have been more likely to drop out of the study; this could result in underestimation of the impact of filial bereavement for some groups. Differences in the dependent variables were less important because we were assessing change in the dependent variable over time. We had no information on whether respondents who lost a parent after 1986 were more or less likely to drop out of the survey. Nonrespondents did not differ from respondents on any of the measures of relationships with parents in 1986.

logical parent and had not experienced a parental death between 1986 and 1989. All individuals in both groups were interviewed in 1986 and 1989. Individuals who did not meet the criteria for inclusion in one of the two groups were excluded from the analyses. This reduced the sample size for analysis to 1,417: 1,407 respondents were excluded because both parents died prior to 1986, 30 were excluded because they experienced the death of a *step*-parent, and 13 were excluded because of missing data on the parent's status.³

Measures

Possible modifying variables. Three general types of modifying variables were considered: (1) sociodemographic characteristics of children, (2) adult relationships with parents, and (3) childhood memories of parents. Sociodemographic characteristics of respondents included gender (1 = female, 0 = male), race (1 = female) black, 0 = other), marital status (married, divorced or separated, widowed, and never-married; married constituted the omitted category in regression analyses), age, family income, and years of education. Information on gender, marital status, age, and income was obtained from the 1989 interview.4 Means and standard deviations of sociodemographic variables are reported in Table 1.

Adult relationships with parents were assessed by asking respondents several questions about the current nature of their relationships with living mothers and fathers in 1986. (1) Emotional support assessed the positive content of prior relationships. This standardized measure was comprised of two questions: "How much does your (mother/father) make you feel loved and cared for?" and "How much is your (mother/father) willing to listen when you need to talk about your worries or problems?" (mother $\alpha = .71$, father $\alpha = .74$). (2)

Relationship strain assessed the negative content of prior relationships with parents. This standardized measure was comprised of two questions: "How much do you feel your (mother/father) makes too many demands on you?" and "How much is your (mother/father) critical of you or what you do?" (mother $\alpha =$.65, father $\alpha = .74$). There were five response categories to the strain and support questions: "a great deal, quite a bit, some, a little, or not at all." (3) Functional status gauged the parent's impairment prior to death. Respondents were asked whether their (mother/father) was "mentally and physically capable of giving advice or help if you need it?" (1 = no, 0 =yes). (4) Frequency of contact indicated how often children visited with their parents: "During the past 12 months, how often did you have contact with your (mother/father)—either in person, by phone, or by mail? Would you say more than once a week, once a week, 2 or 3 times a month, about once a month, less than once a month or never?" (coded 0 to 5, with 5 indicating more frequent contact).

Childhood memories of parents were assessed with four questions: (1) "While you were growing up, did anyone in your home have a serious drinking problem? (2) What about a mental health problem? (3) Was anyone violent? (4) Did your parents have serious marital problems?" Respondents were asked to indicate if it was the mother or father who exhibited each of these problems (yes = 1, no = 0 for each question). Marital problems between parents were coded as present (= 1) or absent (= 0) for both mothers and fathers.

Death of a parent. In 1989, respondents were asked whether a biological mother or father had died since the time of the first interview. Between 1986 and 1989, 112 adult children experienced the death of a mother, 88 experienced the death of a father, and 7 had lost both parents. The bereavement variables include a dummy variable for mother's death (1 = mother died, 0 = otherwise) and father's death (1 = father died, 0 = otherwise).

Dependent variables measuring adult child functioning. Psychological distress was measured with an 11-item version of the Center for Epidemiological Studies Depression Scale (CES-D). The CES-D has demonstrated high reliability and validity in community surveys and is widely accepted among epidemiologists as a measure of psychological distress in gen-

³ Children whose stepparent died were excluded because the status of adult-child-stepparent relationships is ambiguous. Many of these relationships are established after children become adults.

⁴ We used information from 1989 because, theoretically, one's "current" sociodemographic position should be more strongly linked to one's current well-being. Preliminary analyses which included a control variable for marital status change between 1986 and 1989, suggested that marital status change would not affect the results of this study.

Table 1. Means and Standard Deviations of Variables: Total Sample, U.S. Adults Ages 24 to 96 in 1986

Variable	Mean	Number of Cases	Variable	Mean	Number of Cases
DEATH OF A PARENT BETV	VEEN 1986	AND 1989	Adult Relationships With Parent	ts, 1986 (Co	ntinued)
Nonbereaved	.854 (.353)	1,417	Functional status of father	.093 (.291)	760
Mother died	.084 (.277)	1,417	Frequency of contact with mother	4.081 (1.179)	981
Father died	.067 (.250)	1,417	Frequency of contact with father	3.707 (1.441)	689
MODIFYING VARIABLES					
Sociodemographic Variables			Childhood Memories of Parents		
Gender (0 = male)	.596 (.491)	1,417	Alcohol problem, mother	.028 (.166)	1,417
Race (0 = nonblack)	.301 (.459)	1,417	Alcohol problem, father	.128 (.334)	1,417
Married	.609 (.488)	1,417	Mental health problem, mother	.030 (.1 72)	1,417
Divorced, separated	.205 (.404)	1,417	Mental health problem, father	.019 (.137)	1,417
Widowed	.052 (.223)	1,417	Violent behavior, mother	.022 (.146)	1,417
Never-married	.134 (.341)	1,417	Violent behavior, father	.073 (.260)	1,417
Age	42.925 (11.853)	1,417	Marital problem between parents	.205 (.404)	1,417
Family income	35.095	1,417		` '	
Years of education	(27.077) 12.757	1,417	ADULT CHILD FUNCTIONIN	G	
	(2.795)	1,417	Psychological distress, 1986	.119 (1.070)	1,417
Adult Relationships With Paren Emotional support from	047	981	Psychological distress, 1989	.010 (1.028)	1,417
mother Emotional support from father	(1.049) 102	689	Physical health, 1986	3.821 (1.014)	1,417
Relationship strain with mother	(1.099) .080 (1.021)	981	Physical health, 1989	3.603 (.999)	1,417
Relationship strain with father	.059	689	Alcohol consumption, 1986	15.409 (32.435)	1,417
Functional status of mother	.093 (.290)	1,081	Alcohol consumption, 1989	12.485 (32.242)	1,417

Note: Numbers in parentheses are standard deviations.

eral populations (Radloff 1977). Respondents were asked how often they experienced each of the following in the past week: "I felt depressed"; "I felt lonely"; "people were unfriendly"; "I enjoyed life"; "I did not feel like eating, my appetite was poor"; "I felt sad"; "I felt that people disliked me"; "I could not get going"; "I felt that everything I did was an effort"; "my sleep was restless"; and "I was happy." CES-D item responses were coded so that higher scores indicated greater distress; item scores were summed and standardized to a mean of zero and a standard deviation of one for the full sample (1986 $\alpha = .89$; 1989 $\alpha = .82$).

Sociologists sometimes speak of "functional equivalents" to psychological distress to describe alternative ways of expressing distress. The most commonly discussed functional equivalent is alcohol consumption, which may be a common expression of distress in certain sociodemographic groups, particularly among men as compared to women (Horwitz and White 1991). A standard approach to measuring alcohol consumption involves assessing both the frequency and volume of consumption (Berkman and Breslow 1983). In our study, alcohol consumption was measured by multiplying the number of days per month that respondents drank by the number of drinks that re-

spondents typically consumed on those days. Scores ranged from 0 to 600.

Some individuals experience physical symptoms and/or impaired physical health in response to stress (Stroebe and Stroebe 1987). There is evidence that self-reports of health are valid measures of physical health status. Idler and Angel (1990) found that self-reported health is a stronger predictor of subsequent mortality than are physician assessments of health. Self-reports of physical health status were obtained from respondents by asking, "How would you rate your health at the present time? Would you say it is excellent, very good, good, fair, or poor?" (coded 1 to 5, with 5 indicating excellent health).

RESULTS

Effects of a Parent's Death

We first compared the physical and psychological functioning of adult children who experienced the death of a parent between 1986 and 1989 with the functioning of adult children who did not have this experience. This analysis assessed whether there are measurable effects of filial bereavement on adult children in a general population. We regressed the 1989 values for the dependent variables on the bereavement variables (i.e., mother died, father died), the sociodemographic variables, and the 1986 value of the dependent variable. Controlling for the 1986 value on the dependent variable allowed us to assess the amount of change in the dependent variable over time.

The results in Table 2 indicate that the impact of filial bereavement depends on both the type of dependent variable considered and on which parent died. Compared to nonbereaved adult children, adult children who recently experienced the death of a mother exhibited a significant increase in psychological distress and a decline in self-reported physical health. Adult children who recently experienced the death of a father exhibited a significant increase in alcohol consumption and a decline in self-reported physical health.

One of our hypotheses was that the death of a mother would have more impact on children than the death of a father. The results suggest that this might be true for the outcome of psychological distress. However, a father's death had more impact on children's alcohol con-

Table 2. Unstandardized OLS Coefficients for the Effects of a Parent's Death and Sociodemographic Characteristics on Adult Children's Functioning in 1989: U.S. Adults Ages 24 to 96 in 1986

	D	ependent Varial	ble
Independent	Psychologic	al Alcohol	Physical
Variable	Distress	Consumption	Health
Death of a Parent (0 = no deat	h)	
Mother died	.183*	1.020	235**
	(.085)	(2.748)	(.080)
Father died	.018	9.781***	209*
	(.090)	(2.909)	(.085)
Sociodemographic	Characteris	tics	
Gender (0 = male	e)018	-5.348***	039
	(.047)	(1.569)	(.044)
Race (0 = nonbla	ck) .129*	.438	025
	(.052)	(1.672)	(.049)
Marital status (0	= married)		
Divorced,	.134*	6.952***	087
separated	(.062)	(1.999)	(.058)
Widowed	.116	2.011	001
	(.111)	(3. 5 71)	(.104)
Never-married	.09 5	1.208	.081
	(.073)	(2.357)	(.0 6 9)
Age	004	017	001
	(.002)	(.070)	(.002)
Family income	003** (.001)	.001 (.033)	.003*** (.001)
Years of education	on025 [™]	177	.013
	(.009)	(.299)	(.009)
1986 value of	.474***	.501***	.542***
dependent variab	le (.022)	(.023)	(.022)
Intercept	.445**	8.313	1.365***
	(.165)	(5.304)	(.175)
R ²	.327	.288	.366
Number of cases	1,417	1,417	1,417

*p < .05 **p < .01 ***p < .001 (two-tailed tests)

Note: Numbers in parentheses are standard errors.

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sumption, and there was about the same impact on physical health. We conducted *t*-tests for the difference between the estimates for the impact of a mother's death versus the impact of a father's death on the dependent variables. Although the results show some difference in the magnitude of the estimates for maternal death versus paternal death, the difference was significant only when predicting changes in alcohol consumption—a father's death had substantially greater impact than a mother's death on adult children's alcohol consumption.

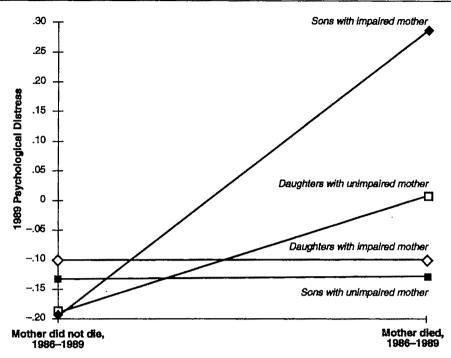


Figure 1. Effect of a Mother's Death on Psychological Distress by Respondents' Gender and 1986 Functional Status of Mother

Factors That Modify Reactions to a Parent's Death

The remainder of our analysis assessed factors that may modify an adult child's reaction to a parent's death. Possible modifying factors included sociodemographic characteristics of children and the nature of prior relationships with parents (see Table 1). We tested a series of intermediate models to derive the final models. First, a separate equation was estimated for each two-way interaction between bereavement and a possible modifying variable (interactions were assessed between possible modifiers and a mother's death and between possible modifiers and a father's death). This involved regressing the 1989 value of the dependent variable on the bereavement variables, a modifying variable, an interaction term between bereavement and a modifying variable, the sociodemographic variables, and the 1986 value of the dependent variable. Missing data were handled by including control variables to indicate the availability of data on specific variables. Where more than one interaction significantly (p < .05) predicted a dependent variable, additional equations were estimated which included all significant interactions to

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determine if a particular interaction predominated as the source of the effect.

Next, since there are theoretical reasons to believe that the nature of relationships with parents differs for sons and daughters, we tested three-way interactions involving bereavement, measures of prior relationships with parents, and child's gender to consider whether the modifying effects of prior relationships with parents operate the same way for sons and daughters. We used the basic model resulting from the procedures described above as the baseline model. We then applied the same estimation procedures we used to assess two-way interactions to test possible three-way interactions to derive the most parsimonious final models. The final models included all significant interaction terms, controls for their component variables and lower-order interactions, the basic set of sociodemographic variables, and the 1986 value on the dependent variable.5 The significant three-way interactions are presented graphically to illustrate the pattern of the interactions. The values plotted in Figures 1 through 5 were obtained by esti-

⁵ Results from tests of intermediate models are available from the authors.

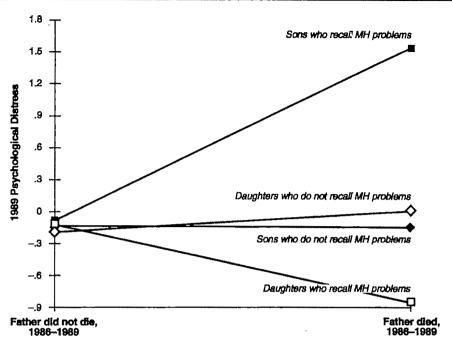


Figure 2. Effect of a Father's Death on Psychological Distress by Respondents' Gender and Childhood Memories of a Father's Mental Health (MH) Problem

mating predicted values on the dependent variables, net of the 1986 value, for bereaved and nonbereaved respondents in relevant subgroups.

Modifying effects and psychological distress. The final model predicting psychological distress in response to a parent's death is presented in the first column of Table 3. Of all the possible modifying variables that could affect the impact of a mother's death on psychological distress, only the three-way interaction involving a mother's death, mother's 1986 functional status, and child's gender is statistically significant. There are two significant interactions involving a father's death. The effect of a father's death significantly interacted with (1) childhood memories of a father's drinking problem and (2) memories of a father's mental health problems and child's gender. The regression coefficient for death of a mother was not significant once the additional control variables and interaction terms were included in the equation. These findings suggest that our initial analysis overstated the effect of a mother's death on psychological distress for some groups. Furthermore, the significant effect of a father's death on psychological distress for some groups was concealed in the basic model.

The interaction involving a mother's death, 1986 mother's functional status, and child's gender is illustrated in Figure 1, which shows the predicted values on distress for the subgroups of men and women who did and did not report their mother as functionally impaired in 1986. Figure 1 shows little variation among the nonbereaved groups in predicted distress levels. However, among the bereaved, 1986 functional status of mother was associated with psychological distress, and this association was very different for sons and daughters. Women who had an unimpaired mother seemed to experience more distress following the mother's death, supporting the salience hypothesis. In contrast, sons seemed to be more upset by a mother's death if the mother was functionally impaired prior to the death.

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The significant two-way interaction of a father's death with childhood memories of a father's drinking problem suggests that the death of a father has a much greater effect on the psychological distress levels of adult children who recall that their father had a drinking problem during the respondent's childhood—however, this effect is in the direction of reduced distress.

The three-way interaction of a father's death with child's gender and childhood memories of

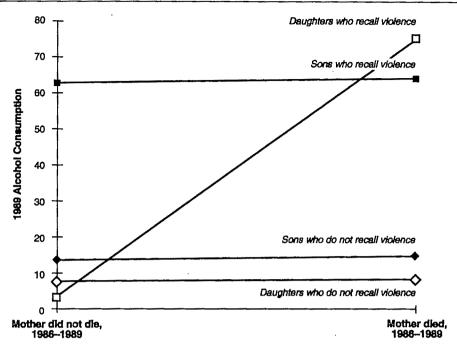


Figure 3. Effect of a Mother's Death on Alcohol Consumption by Respondents' Gender and Childhood Memories of a Violent Mother

a father with mental health problems is illustrated in Figure 2. This figure shows that, among the nonbereaved respondents, there was little variation in predicted distress scores on the basis of gender and fathers' mental health problems. However, both sons and daughters seem to be more affected by a father's death if they had childhood memories of a father with mental health problems. Sons who recalled that their fathers had a mental health problem during the son's childhood exhibited much higher distress scores than bereaved sons who did not have this childhood memory. In contrast, daughters who recalled a father's mental health problem exhibited lower distress scores following the father's death.

Modifying effects and alcohol consumption. The final model predicting alcohol consumption is presented in the second column of Table 3. Even though the main effect of a mother's death on alcohol consumption was nonsignificant in the final model, there was a significant three-way interaction regarding a mother's death. This interaction indicates that there was a group of people whose alcohol consumption was significantly affected by a mother's death but that the effect was confounded in the basic model. The main effect of a father's death remains statistically significant in predicting al-

cohol consumption; however, the effect was in the opposite direction to that reported in the basic model of Table 2. Important interaction effects appear to influence the estimated effect of a father's death on alcohol consumption for different groups in different directions. Once we controlled for the modifying influences, a father's death was associated with a reduction in alcohol consumption. As we show below, this occurred because some groups seemed to decrease alcohol consumption following a father's death, while others increased their consumption levels.

The significant three-way interaction regarding a mother's death involves gender of the child and having childhood memories of a violent mother. This interaction is illustrated in Figure 3. This figure suggests that women who have childhood memories of a violent mother consume more alcohol in response to a mother's death than do other bereaved children. Sons who recall having a violent mother in childhood also have high predicted values on alcohol consumption—but this is true whether or not sons had lost a mother.

Statistically significant two-way interactions indicate that adult children's reactions to the death of a father depend on age of the child, marital status of the child, and prior levels of

Table 3. Unstandardized OLS Coefficients for the Effects of a Parent's Death and Modifying Variables on Adult Children's Functioning in 1989: U.S. Adults Ages 24 to 96 in 1986

	Depende	nt Variable		Depende	nt Variable
Independent Variable	Psychologica Distress	l Alcohol Consumption	Independent Variable	Psychologica Distress	l Alcohol Consumption
Death of a Parent (0 = no de	ath)		Interactions Involving a Mo	ther's Death (Continued)
Mother died	.004 (.185)	1.295 (3.797)	Mother died × violent behavior × gender	_	70.786*** (19.256)
Father died	012 (.145)	-33.707° (15.268)	Interactions Involving a Fat Father's drinking problem		-6.563
$Socio de mographic\ Variables$				(.071)	(3.535)
Gender (0 = male)	057 (.058)	-2.852 (2.170)	Father died × father's drinking problem	578 * (.250)	128.746 (13.250)
Race $(0 = nonblack)$.133* (.053)	.217 (1.586)	Father's mental health problem	.051 (.379)	
Marital status (0 = married)		Father's mental health	.020	
Divorced	.134* (.063)	5.105 ^{***} (1.943)	problem × gender Father died × gender	(.428) .209	-19.876*
Widowed	.089 (.111)	-2.135 (3.554)	Father died × father's	(.187) 1.641	(8.259)
Never-married	.090 (.073)	.973 (2.266)	mental health problem Father died × father's ment health problem × gende	mi -2.575*	
Age	004 (.002)	058 (.071)	Father died × divorced	er (1.132) —	19.183**
Family income	003** (.001)	.005 (.031)	child Father died × widowed	_	(7.312) 33.187**
Years of education	025** (.009)	151 (.284)	child Father died × never- married child	_	(10.594) 15.040 (9.774)
1986 value of dependent variable	.471*** (.023)	.497*** · (.022)	Father died × age of child	ı –	.781** (.268)
INTERACTION EFFECTS A	ND RELEV	ANT	Emotional support from father	_	.700 (.982)
MODIFYING VARIABLES Interactions Involving a Moth	er's Death		Data presence indicator ^b		-1.979 (3.104)
Mother's functional status	063 (.123)		Father died × emotional support		14.953*** (4.225)
Data presence indicator, mother's functional state	.035 as (.105)		Father's drinking problem × gender	. —	3.350 (4.427)
Functional status × gender	.151 (.111)		Father died × father's drinking problem × ger	nder	-123.963*** (16.094)
Mother died \times gender	.192 (.245)	611 (5.042)	Frequency of contact with father	_	.559 (.856)
Mother died × functional status	.476 (.252)	-	Frequency of contact × gender	_	662 (.697)
Mother died × functional status × gender	671* (.333)		Father died × frequency of contact	_	-5.789* (2.262)
Mother's violent behavior	_	48.976*** (9.248)	Father died × frequency of contact × gender		11.804 (2.755)
Mother's violent behavior × gender		-53.139*** (10.847)	Intercept	.410* (.193)	9.814 (5.326)
Mother died × mother's violent behavior			R ² Number of cases	.332 1,417	.377 1,417

^{*}p < .05 **p < .01 ***p < .001 (two-tailed tests)

Note: Numbers in parentheses are standard errors.

^{*} Parameter cannot be estimated in this model.

^b Only one indicator is needed because "frequency of contact with father" and "emotional support from father" use the same set of cases.

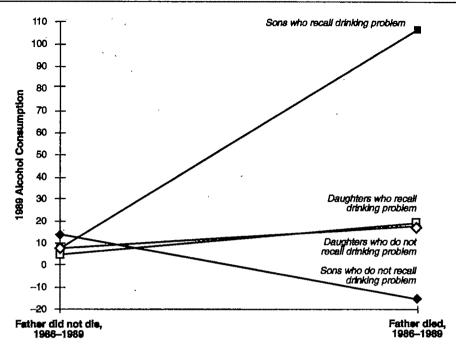


Figure 4. Effect of a Father's Death on Alcohol Consumption by Respondents' Gender and Childhood Memories of a Father's Drinking Problem

emotional support from the father. The positive interaction with age suggests that older children are more likely to drink in response to a father's death. Older children actually drank less than younger children among the nonbereaved, while the opposite was true among the bereaved. The effect of a father's death on alcohol consumption was negative for persons less than 47 years old and positive for persons age 47 or older.

The interaction of a father's death with marital status in predicting alcohol consumption suggests that the effect of a father's death is strongest for married children and weakest for widowed children. Married, never-married, and divorced children reduced their alcohol consumption following a father's death (about 34, 19, and 15 drinks per month respectively), while widowed children basically did not change the amount they drink.⁶

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The positive interaction between a father's death and 1986 levels of emotional support

from fathers indicates that children who received more emotional support from their fathers drink more following a father's death. Previous levels of emotional support from fathers were not associated with alcohol consumption among the nonbereaved. However, once an adult child's father died, prior levels of emotional support from the father were positively associated with alcohol consumption (15 drinks more per month for each increment increase in 1986 emotional support from fathers).

Table 3 also reports significant three-way interactions concerning a father's death and child's gender with two measures of previous relationships with fathers. These effects are illustrated in Figures 4 and 5 with plots of the predicted values on alcohol consumption for the relevant subgroups.

Figure 4 suggests that the effect of a father's death on alcohol consumption was much greater for sons with childhood memories of a father's drinking problem (an increase of about 100 drinks more per month following the father's death). Such memories seem to have had less influence on daughters' drinking behavior following the death of a father (an increase of about 15 drinks per month). On the other hand, sons who did not have childhood

⁶ These values were obtained from Table 3, where the change in the predicted number of drinks per month for married children is −33.7 (coefficient for father died). The values for the other marital status groups can be obtained by adding the value for the interaction term to −33.7 for each relevant group.

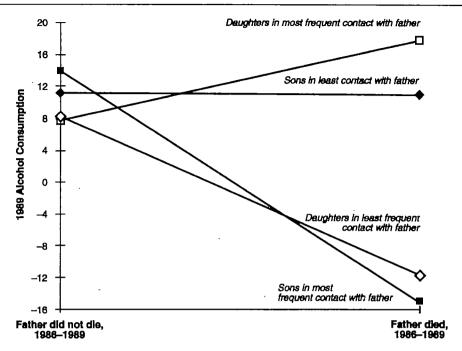


Figure 5. Effect of a Father's Death on Alcohol Consumption by Respondents' Gender and 1986 Frequency of Contact With Father

memories of a father with alcohol problems actually reduced their alcohol consumption by about 29 drinks per month following the father's death, while daughters increased their drinking by about 10 drinks per month.

Figure 5 shows little variance among nonbereaved groups in the association of 1986 frequency of contact with fathers and alcohol consumption. However, previous frequency of contact with fathers did influence the drinking patterns of children who had experienced a father's death. Supporting the salience hypothesis, daughters who were in more frequent contact with their fathers prior to the death exhibited much higher levels of alcohol consumption following the father's death than did daughters who were not in frequent contact with their fathers. Women who were not in contact with their fathers prior to the death appear to have reduced their alcohol consumption more than nonbereaved women. In contrast, sons who were in frequent contact with their fathers prior to the death exhibited lower levels of alcohol consumption than did their nonbereaved counterparts. Sons who did not see their fathers prior to the father's death did not differ from nonbereaved sons on alcohol consumption.

Modifying effects and physical health. The estimated effects of bereavement on physical health status were not modified by any of the child's sociodemographic characteristics or by any of the variables indicating the quality of previous relationships with parents. This suggests that reactions to a parent's death, as expressed in physical health status, do not differ on the basis of sociodemographic characteristics of children or the nature of prior relationships with the parent.

DISCUSSION

The death of a parent appears to be a stressful life event that adversely affects the physical and psychological well-being of adult children in the general population. However, these general effects of parental death provide an incomplete picture. Some groups of adult children were more adversely affected than others by the death of a parent, while some groups actually exhibited improved functioning following a parent's death. The nature of these effects depended on which parent died, the sociodemographic characteristics of the adult children, and the particular dependent variable considered.

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Positive Salience and Reactions to Loss

Our theoretical framework suggests that individuals for whom relationships with parents were more salient and positive prior to the parent's death would be more adversely affected by the parent's death. Many of our results support this hypothesis. For example, having a more emotionally supportive father in adulthood is associated with stronger bereavement reactions as expressed by increased alcohol consumption following the death of a father.

We sometimes found that negative childhood memories of a parent were associated with stronger reactions to the death of a parent as expressed in the amount of change in the dependent variables over time. Notably, this reaction was often expressed in reduced levels of distress, suggesting that the loss of a parental relationship characterized by negative-salience sometimes leads to improvement in an adult child's well-being. These findings fit with Wheaton's (1990) work on role histories by suggesting that the death of a parent may come as a relief to the child who has a more difficult family history; these findings also support the filial salience hypothesis—children who did not have negative childhood memories seemed to be more upset by the loss.

Possible Positive Effects of a Parent's Death

The results for alcohol consumption suggest that a parent's death may sometimes result in positive changes in health behavior. For example, while older adult children increased alcohol consumption in response to a father's death, adult children under age 47 actually reduced their alcohol consumption following a father's death. It may be that younger children reduce their alcohol consumption following a father's death because they are concerned about the implications of the death for their own mortality. On average, young children have young parents, and the experience of premature death of a parent may have a deterrent effect on alcohol consumption (and possibly other negative health behaviors as well) that could affect the child's own health status.

The possible deterrent effect of a father's death on alcohol consumption is also seen in the findings for marital status: Married children

reduced their alcohol consumption following a father's death much more so than did other children. This may have occurred because of the relationship between marital status and health behaviors generally. There is evidence that married adults drink less than unmarried adults, in part because they have a spouse available to monitor and regulate their drinking habits (Umberson 1992b). Spouses are particularly likely to serve this role if they perceive that the individual is vulnerable to a specific health risk (for example, if there is a history of heart disease in the spouse's family). Following the death of a parent, the spouses of bereaved adult children may become more concerned about the health of the bereaved child and serve an even stronger regulatory

Gender of Parent and Child

Sons and daughters often react to a parent's death in different ways. This is not surprising in light of the substantial literature on gender differences in the dynamics and quality of relationships between adult children and parents (Chodorow 1978; Rossi and Rossi 1990; Umberson 1992a).

Gendered patterns of reactivity following the loss of a relationship may reflect differences in sons' and daughters' previous relationships with mothers and fathers. Sons may respond to a father's death in a way that parallels how their fathers dealt with stress. This sort of modeling effect is suggested by two findings. First, sons with childhood memories of a father with mental health problems experienced more psychological distress than other children in response to a father's death. Second, sons whose fathers exhibited alcohol problems were more likely to increase their own alcohol consumption following the father's death. Daughters identify less than sons with fathers (Chodorow 1978), and as a result, daughters may be less likely to respond to the father's death in a way that mirrors the father's previous problems.

In contrast to sons, daughters with negative childhood memories of fathers (e.g., memories of a father's mental health or alcohol problems) exhibited either no change or improved functioning following the father's death. Daughters may have been less upset than sons when a troubled father died because the death has a very different symbolic value for daughters.

Daughters may have been more likely than sons to perceive fathers with mental health or alcohol problems as threatening. Daughters are also more likely than sons to assume caregiving responsibility for impaired parents (Mancini and Blieszner 1989) and to feel responsible for the well-being and problems of others (Baines, Evans, and Neysmith 1991). This sense of threat or responsibility may be burdensome, and consequently, daughters may feel more relief than sons when a troubled father dies. On the other hand, we found that childhood memories of a violent mother resulted in stronger negative reactions from daughters than sons following the mother's death. Freud argued that the loss of ambivalent and conflicted relationships is more difficult for individuals to resolve than the loss of stable relationships; however, other theoretical perspectives and empirical studies (including our own) generally have reached the opposite conclusion (see Stroebe and Stroebe 1987). It may be that extremely troubled relationships between mothers and daughters juxtaposed with the unique closeness of mother-daughter ties (see Chodorow 1978; Rossi and Rossi 1990) are particularly likely to undermine the wellbeing of daughters following the mother's death.

Adult relationships with parents also modify the bereavement reaction differently for sons and daughters. For example, daughters appeared to drink more alcohol following a father's death if they were in more frequent contact with fathers prior to the death, supporting the salience hypothesis. Among sons, however, more frequent contact was associated with a reduction in alcohol consumption. Perhaps sons make positive health behavior changes whereas daughters do not partly because sons identify more with fathers and consequently with the possibility that the father's mortality foreshadows the son's own mortality. Furthermore, frequency of contact with fathers may be positively associated with the degree to which sons identify with fathers, explaining why more frequent contact with fathers in 1986 was associated with greater reductions in sons' alcohol consumption following a father's death. We also found that sons' psychological functioning in 1989 was more adversely affected than daughters' by the loss of a mother who was functionally impaired in 1986. This may have occurred because sons

were less likely than daughters to care for impaired mothers and thus felt some sense of failed responsibility or guilt following the loss.

Unsupported Hypotheses

We generated a number of specific hypotheses indicating which groups would be more adversely affected by a parent's death. Yet a number of factors that we expected to influence children's reactions to a parent's death appeared to have no influence in this regard (e.g., the socioeconomic status and race of the child and the degree of strain in prior adult relations with parents). There are three plausible explanations for these unsupported hypotheses. First, group differences in relationship salience may not always be reflected in degree of response to the loss of relationships—thus, challenging the salience hypothesis and theoretical framework. Second, certain variables may be invalid as proxies for salience. Finally, the overall impact of losing a parent may be great enough to override minor group differences in the salience of relationships with parents.

A Theory of Group Differences in Reactions to Stressful Life Events

The factors we have identified as reflecting relationship salience (e.g., sociodemographic characteristics, and frequency and quality of prior relationships with parents) are not perfect proxies. Nonetheless, our findings suggest a link between these proxies for relationship salience and reactions to relationship loss. While our findings provide some support for the theoretical framework of group differences in reactions to bereavement, they raise additional theoretical concerns. First, they highlight the importance of better conceptualizing and operationalizing relationship salience. The specific hypotheses in this study are limited because they are based on the assumption that we know which groups of individuals experience relationships with parents as more salient. Previous research provides evidence about group differences in quality of relationships and frequency of contact with parents, but frequency and quality of relationships may not translate directly into salience. For example, the relationship with a mother may be highly salient to an adult child even if the child rarely sees

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the mother. Theory and research, both qualitative and quantitative, should include a direct analysis of the salience and symbolic meaning of relationships with parents for adult children.

Our findings further suggest that reactions to the death of a parent depend not only on group differences in relationship salience, but also on differences in the ways that social groups express distress. For example, sons and daughters may experience different levels of relationship salience with parents, but they may also respond to the loss of an equally salient relationship in different ways, perhaps with psychological distress as compared to alcohol consumption or with a decrease rather than an increase in the particular outcome of distress. Health behaviors may be particularly important outcomes following the death of a biological parent because adult children begin to think seriously about their own mortality for the first time (see Donnelly 1987). In response, some children may make positive health behavior changes, even while they are upset by the loss. This highlights the importance of examining a range of expressions of distress when considering group differences in reactions to a stressful life event. Moreover, there may be different time lines of reactivity depending on how a particular group expresses distress. For example, changes in psychological distress and alcohol consumption may be apparent in the first few months following a death, but physical health effects may not be apparent until much later. If different groups express distress in ways that are time dependent, data collected at one point in time may not reveal distress in a particular group since it may have already dissipated or not yet appeared. A more complete and predictive theoretical model of socially patterned reactions to stressful life events must incorporate propositions regarding group differences in expressions of reactivity and the timing of those reactions, as well as group differences in relationship salience.

DEBRA UMBERSON is Associate Professor of Sociology at the University of Texas, Austin. She studies family, gender, and health issues. Her recent publications include a study of psychological distress among divorced fathers (with Christine L. Williams in Journal of Family Issues, vol. 14, 1993, pp. 378-400 and a study of gender differences in distress following widowhood (with Camille B. Wortman and Ronald C. Kessler in Journal of Health and Social Behavior, vol. 33, 1992, pp. 10-24). She is currently studying the impact of filial bereavement on marital quality and conducting in-depth interviews with recently bereaved adult children to build on the findings of the present study. Her research on intergenerational relationships and bereavement is supported by a FIRST Award from the National Institute on Aging.

MEICHU D. CHEN is Research Affiliate with the Population Research Center at the University of Texas at Austin. Her main areas of interest include social stratification, the sociology of education, and quantitative methods.

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⁷ An additional analysis of our data suggests that psychological distress is most apparent in the first few months following a parent's death, but that physical health effects are not apparent until much later. However, since the main effect of most categories of time (using a 4-category variable) were not statistically significant and the coefficient for any particular time category was difficult to interpret, these findings should be considered with caution.

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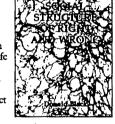
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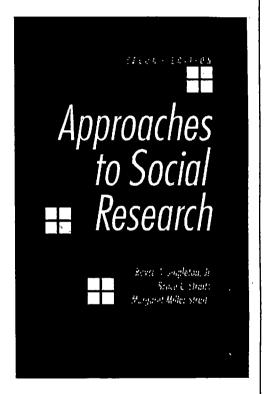
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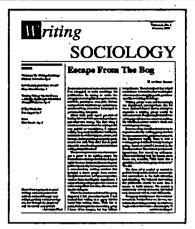
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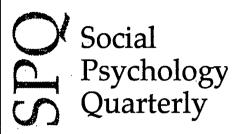
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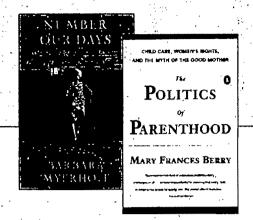
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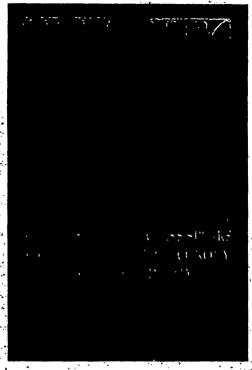
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